

Rotating Nut Type Actuator **NSA**



Distributor

Ultra-high speed with long stroke

The very latest rotating nut type actuator

NSA



01

Equipped with a Battery-less
Absolute Encoder

The advantages
of Battery-less

- Battery replacement is not required
- Battery-related errors will not occur
- Helps reduce the purchase and management costs of batteries

The advantages
of Absolute

- Home return is not required at startup
- Home-position check sensor is not required
- Home position information is retained even if the power is shut off

Battery-less
Absolute
Encoder



02

**Stroke: 2,300mm,
Maximum Speed: 2,500mm/s**

The linear slider movement for these actuators is created by rotating the nut rather than the ball screw with a motor. Since the ball screw does not rotate, it is capable of high-speed movement even with a long stroke without being affected by resonance, shortening the cycle time.

Comparison with our equivalent product

Travel distance (stroke): 2,300mm, lead: 50mm, horizontal mount

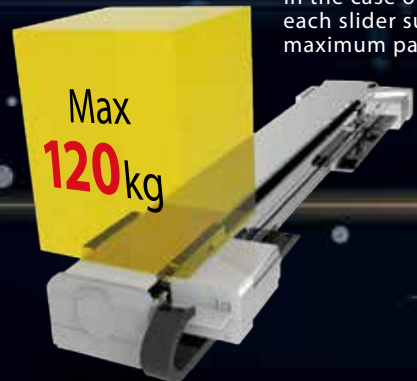


03

120kg Maximum payload

A 750W motor to support high payload is now available.

* In the case of the multi-slider, each slider supports the maximum payload.



Max
120kg

NSA-W
(equipped with a 750W motor)

04

Multi-slider

The multi-slider has a single axis equipped with two motors that can operate individually.



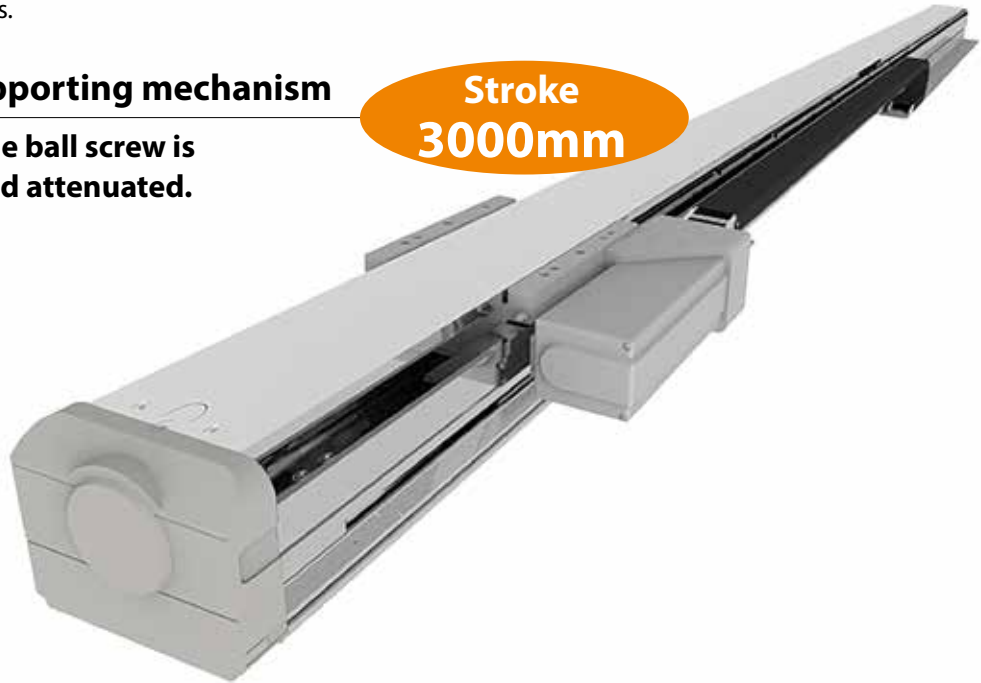
Ball Screw Supporting Type

A new model that can suppresses vibration from the ball screw and support the maximum stroke of 3000mm. It also supports multi-sliders.

Ball screw supporting mechanism

* Vibration of the ball screw is suppressed and attenuated.

Stroke
3000mm



Side-mount / Ceiling-mount specifications

All the types support both wall-mount and ceiling-mount options.

Side-mount



Ceiling-mount

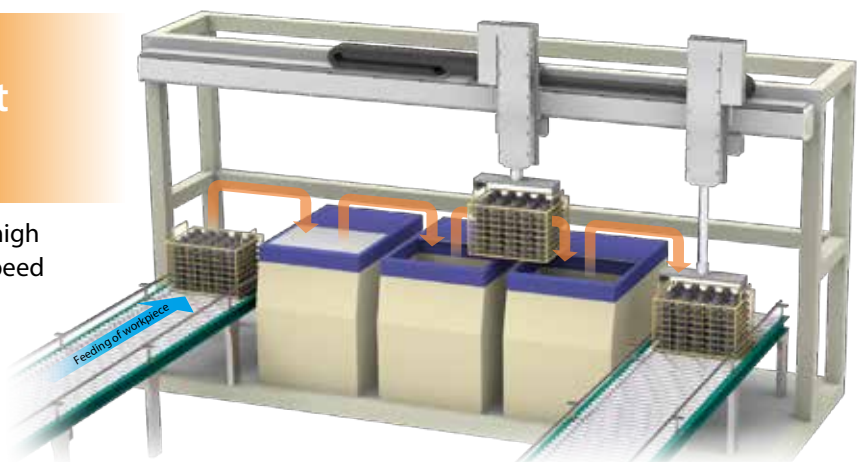












3-tank type washing and drying equipment

- feed, transfer and take out of workpieces -

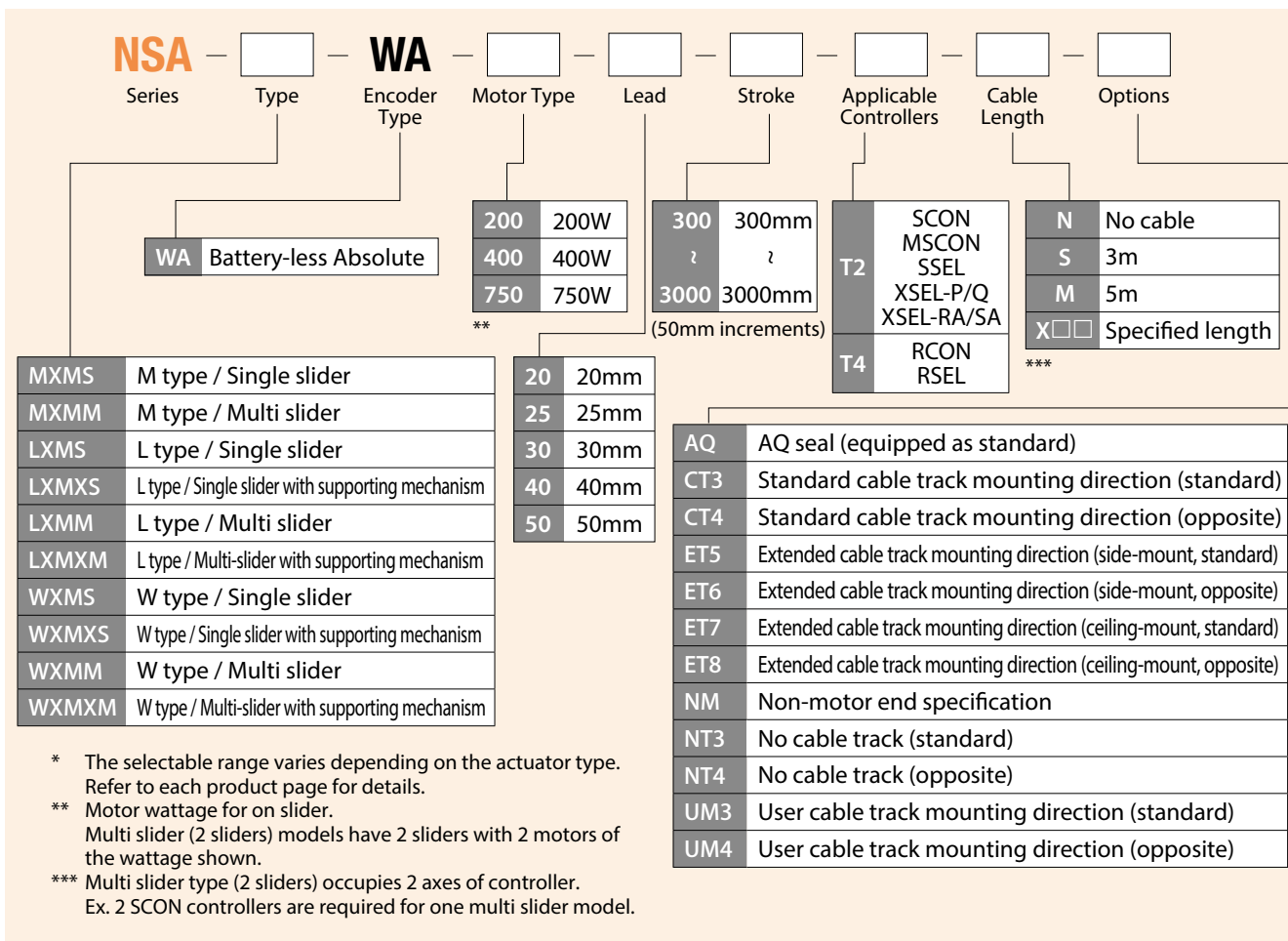
The long stroke NSA can be mounted high above the workpiece for stable high-speed transportation.

In addition, the multi-slider allows for space-saving and efficient operations without wasteful cycles.



Type	External view	Body width	Motor wattage (W)	Lead (mm)	Positioning repeatability (mm)	Stroke (mm)	Max speed (mm/s)	Horizontal max. payload (kg)	Specifications/ Drawings
NSA	MXMS	 125mm	200	30	±0.01	550~1800 (50mm pitch)	1800	20	P.7~12
				20			1200	35	
	MXMM	 125mm	200	30	±0.01	300~1500 (50mm pitch)	1800	20	P.13~18
				20			1200	35	
	LXMS	 145mm	400	40	±0.01	600~2250 (50mm pitch)	2400	40	P.19~24
				20			1300	80	
	LXMM	 145mm	400	40	±0.01	300~2250 (50mm pitch)	2400	40	P.25~30
				20			1300	80	
	NEW LXMXS	 145mm	400	40	±0.01	2300~3000 (50mm pitch)	2400	40	P.31~36
				20			1300	80	
	NEW LXMMX	 145mm	400	40	±0.01	2300~2700 (50mm pitch)	2400	40	P.37~42
				20			1300	80	
WXMS	 198mm	750	50	±0.01	650~2300 (50mm pitch)	2500	60	P.43~48	
			25			1300	120		
WXMM	 198mm	750	50	±0.01	300~2300 (50mm pitch)	2500	60	P.49~54	
			25			1300	120		
NEW WXMMS	 198mm	750	50	±0.01	2350~3000 (50mm pitch)	2500	60	P.55~60	
			25			1300	120		
NEW WXMMS	 198mm	750	50	±0.01	2350~2650 (50mm pitch)	2500	60	P.61~66	
			25			1300	120		

* Dimensions are for horizontal-mount. Refer to each product page for the dimensions of side-mount and ceiling-mount.



Mounting of Actuators

Refer to each product page for the location of through holes.

When fixing the actuator with bolts, use special washers (supplied accessory) for high-strength bolts.

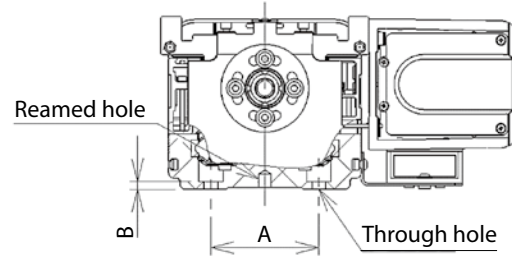
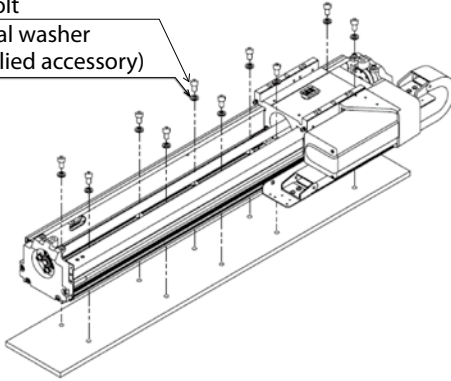
Do not use normal spring washers.

* To fix the actuator, remove the end cover and screw cover, and then fasten bolts using the through holes in the base.

Horizontal-Flat mount

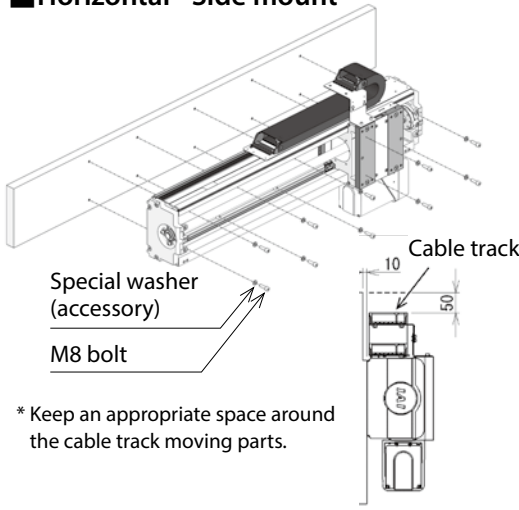
M8 bolt

Special washer
(supplied accessory)



Type	Dimensions (mm)		Through hole diameter	Bolt for fixing the base	Reamed hole
	A	B			
MXMS, MXMM	70	5	φ9	M8	φ8H7, depth 10
LXMS, LXMM LXMXS, LXMXM	90	8.5			
WXMS, WXMM WXMXS, WXMXM	130	13			

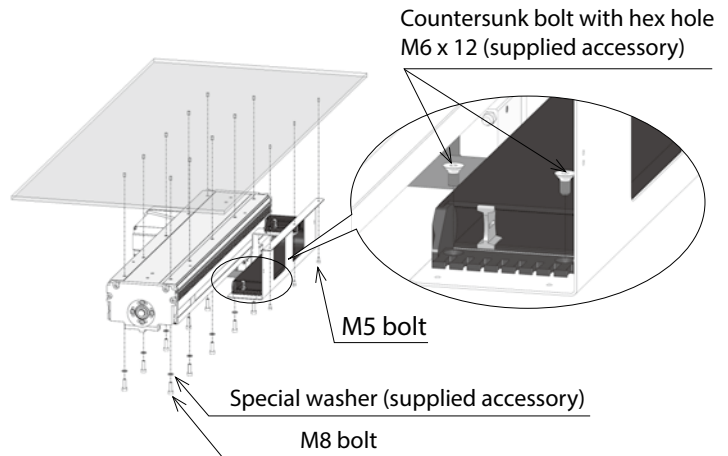
Horizontal - Side mount



* Keep an appropriate space around the cable track moving parts.

Horizontal - Ceiling mount

The guide rail is to be installed by the customer.



Supported mounting methods for cable track (option)

Option name	Type	Supported mounting method		
		Horizontal	Side mount	Ceiling mount
Standard cable track mounting direction (standard)	CT3	○	×	×
Standard cable track mounting direction (opposite)	CT4	○	×	×
Extended cable track mounting direction (side-mount, standard)	ET5	×	○	×
Extended cable track mounting direction (side-mount, opposite)	ET6	×	○	×
Extended cable track mounting direction (ceiling-mount, standard)	ET7	×	×	○
Extended cable track mounting direction (ceiling-mount, opposite)	ET8	×	×	○
No cable track (standard)	NT3	○	○	○
No cable track (opposite)	NT4	○	○	○
User cable track mounting direction (standard)	UM3	○	×	×
User cable track mounting direction (opposite)	UM4	○	×	×

NSA-MXMS

±10μm
Standard

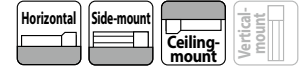
Battery-less
Absolute

Body Width
130
mm

200
W

Model Specification Items

NSA	MXMS	WA	200						AQ	
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options	Refer to Options table below.	
		WA Battery-less Absolute	200 200W	30 30mm 20 20mm	550 550mm 1800 1800mm (50mm increments)	T2 SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA T4 RCON RSEL	N None S 3m M 5m X□□ Specified length			



Stroke			
Stroke (mm)	NSA-MXMS	Stroke (mm)	NSA-MXMS
550/600	○	1250/1300	○
650/700	○	1350/1400	○
750/800	○	1450/1500	○
850/900	○	1550/1600	○
950/1000	○	1650/1700	○
1050/1100	○	1750/1800	○
1150/1200	○		

Options * Please check the Options reference pages to confirm each option.			
Name	Model	Reference Page	
AQ seal (equipped as standard) (Note 1)	AQ	67	
Standard cable track mounting direction (standard) (Note 2)	CT3	67	
Standard cable track mounting direction (opposite) (Note 2)	CT4	67	
Extended cable track mounting direction (wall-mount, standard) (Note 2)	ET5	67	
Extended cable track mounting direction (wall-mount, opposite) (Note 2)	ET6	67	
Extended cable track mounting direction (ceiling-mount, standard) (Note 2)	ET7	67	
Extended cable track mounting direction (ceiling-mount, opposite) (Note 2)	ET8	67	
Non-motor end specification	NM	68	
No cable track (standard) (Note 2)	NT3	68	
No cable track (opposite) (Note 2)	NT4	68	
User cable track mounting direction (standard) (Note 2)	UM3	68	
User cable track mounting direction (opposite) (Note 2)	UM4	68	

(Note 1) Be sure to fill in the Model Specification Items option column.
 (Note 2) Be sure to fill in one of the codes in the Model Specification Items option column.

Cable Length			
Type	Cable Code	T2	T4
Standard	S (3m)	○	○
	M (5m)	○	○
Specified length	X06 (6m) ~ X10 (10m)	○	○
	X11 (11m) ~ X15 (15m)	○	○
	X16 (16m) ~ X20 (20m)	○	○
	X21 (21m) ~ X25 (25m)	○	○
	X26 (26m) ~ X30 (30m)	○	○

(Note) This is a robot cable.

POINT

Selection Notes

- (1) The payload in the "Main Specifications" indicates the maximum value. Please refer to the "Table of Payload by Speed/Acceleration" for more details.
- (2) The center mass location of the mounted object should be less than half the overhang distance. Even when the overhang distance or load moment is within the allowable value, if abnormal vibration or noise is generated during operation, use less stringent operating conditions.
- (3) The guideline for the overhang load length is 750mm or less in the Ma, Mb and Mc directions. Please refer to P.69 for more information regarding the overhang load length.
- (4) Estimated allowable duty varies depending on the load factor. Please refer to P. 69 for more information.
- (5) Refer to P.6 for applicable mounting method.

Main Specifications

Item		Description	
Lead	Ball screw lead (mm)	30	20
	Max. payload (kg)	20	35
Horizontal	Speed/acceleration/ deceleration	Max speed (mm/s)	1800
		Rated acceleration/deceleration (G)	0.3
		Max. acceleration/deceleration (G)	0.5
Thrust force	Rated thrust force (N)	113.9	170.9
	Min. stroke (mm)	550	550
Stroke	Max. stroke (mm)	1800	1800
	Stroke pitch (mm)	50	50

Item	Description
Drive system	Ball screw φ16mm rolled C5 or equivalent
Positioning repeatability	±0.01mm
Lost motion	0.02mm or less
Base	Material: Aluminum with white alumite treatment
Linear guide	Direct-acting infinite circulation type
Allowable static moment	Ma: 560N-m
	Mb: 800N-m
	Mc: 1,030N-m
Allowable dynamic moment (Note 3)	Ma: 123N-m
	Mb: 176N-m
	Mc: 227N-m
Ambient operating temp. & humidity	0 to 40°C, max. 85% RH or less (Non-condensing)
Degree of protection	-
Vibration resistance/shock resistance	4.9m/s ²
Compliant international standards	CE marking, RoHS Directive
Motor type	AC servo motor (200V)
Encoder type	Battery-less Absolute (17-bit)
Encoder pulse count	131072 pulse/rev

(Note 3) Assumes a standard rated life of 10,000km. The running life will vary depending on operation and installation conditions. Refer to P.1-180 of the General Catalog 2020 for operational life.

Slider Type Moment Direction

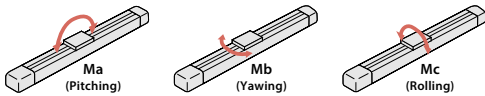


Table of Payload by Speed/Acceleration

The payload is in units of kg.

Lead (mm)	Max speed (mm/s)	Acceleration (G)			
		0.3	0.4	0.5	0.6
30	1800	20	10	5	-
20	1200	35	25	15	5

Stroke and Max Speed

Stroke	550~1800 (50mm increments)
Lead	
30	1800
20	1200

(Unit: mm/s)

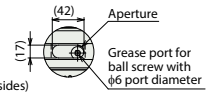
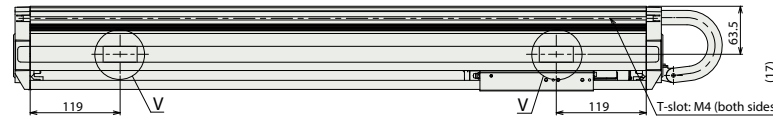
■ NSA-MXMS_Standard Cable Track Mounting Direction (standard/CT3)

(Note) Connect the motor cable and encoder cable to the cable joint connector.

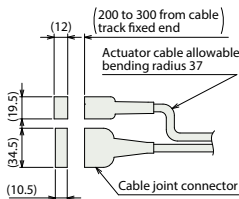
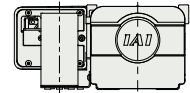
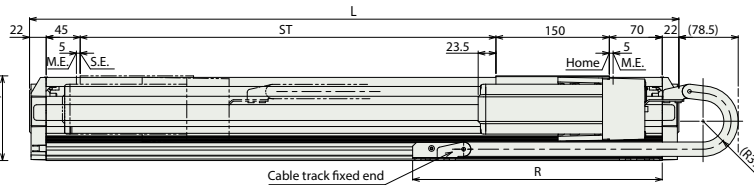
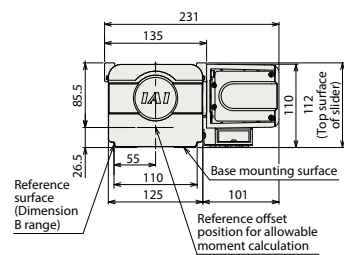
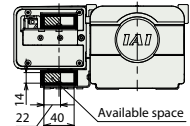
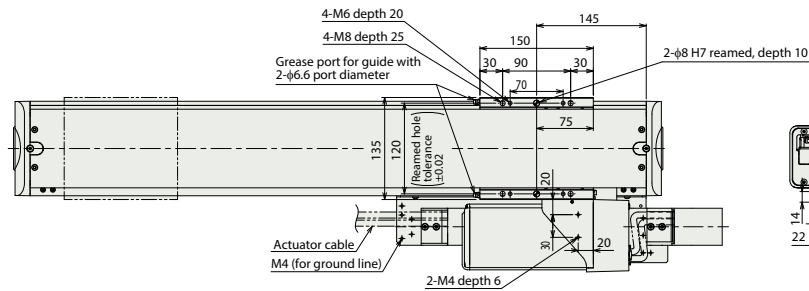
Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.

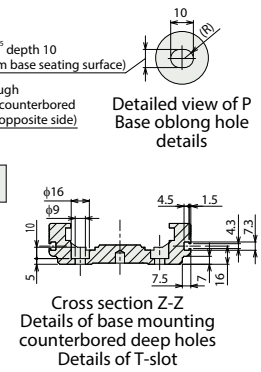
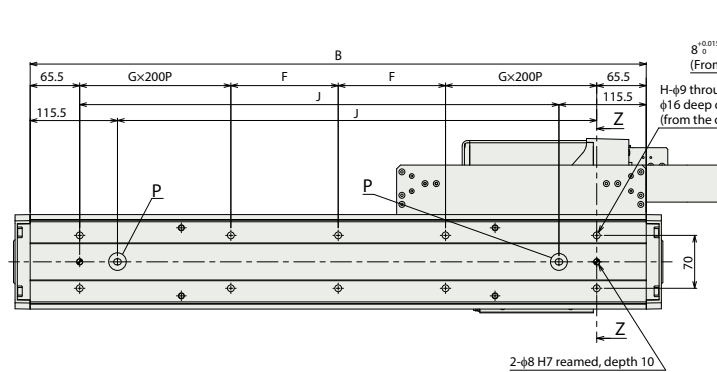
ST: Stroke
M.E: Mechanical end
S.E: Stroke end



Detailed view of V Ball screw grease lubrication port (with grease port cap removed)



Actuator cable connecting part



■ Dimensions by Stroke

Stroke	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	
L	859	909	959	1009	1059	1109	1159	1209	1259	1309	1359	1409	1459	1509	1559	1609	1659	1709	1759	1809	1859	1909	1959	2009	2059	2019	
B	815	865	915	965	1015	1065	1115	1165	1215	1265	1315	1365	1415	1465	1515	1565	1615	1665	1715	1765	1815	1865	1915	1965	2015	2065	
F	142	167	192	217	242	267	292	317	142	167	192	217	242	267	292	317	142	167	192	217	242	267	292	317	142	167	
G	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4	
H	10	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	18	18	18	18	18	18	18	18	18	22	22
J	634	684	734	784	834	884	934	984	1034	1084	1134	1184	1234	1284	1334	1384	1434	1484	1534	1584	1634	1684	1734	1784	1834	1884	
R	330	366	384	402	438	456	492	510	528	564	582	618	636	654	690	708	744	762	780	816	834	852	888	906	942	960	

■ Mass by Stroke

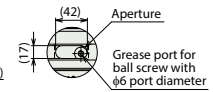
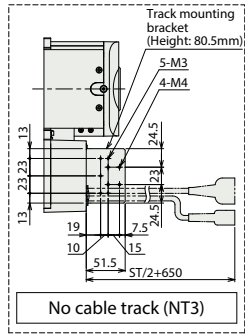
Stroke	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800
Mass (kg)	17.0	17.6	18.2	18.8	19.4	20.0	20.6	21.2	21.8	22.4	23.0	23.6	24.2	24.8	25.4	26.0	26.6	27.1	27.7	28.4	28.6	29.2	29.8	30.4	31.0	31.6

NSA-MXMS User Cable Track Mounting Direction (standard/UM3)

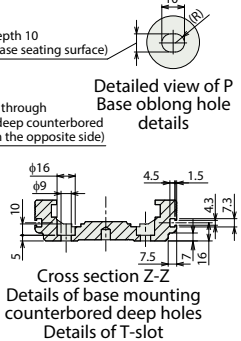
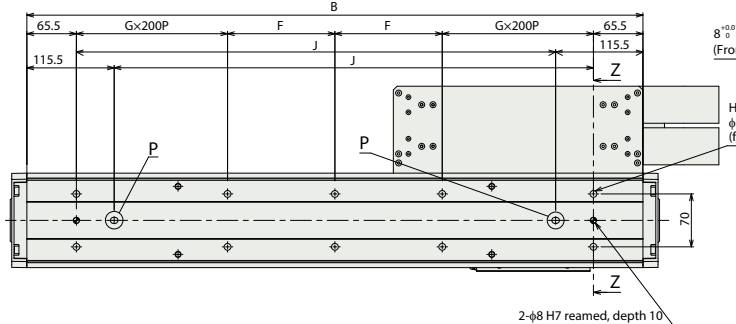
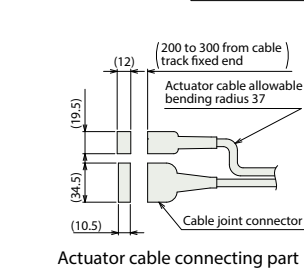
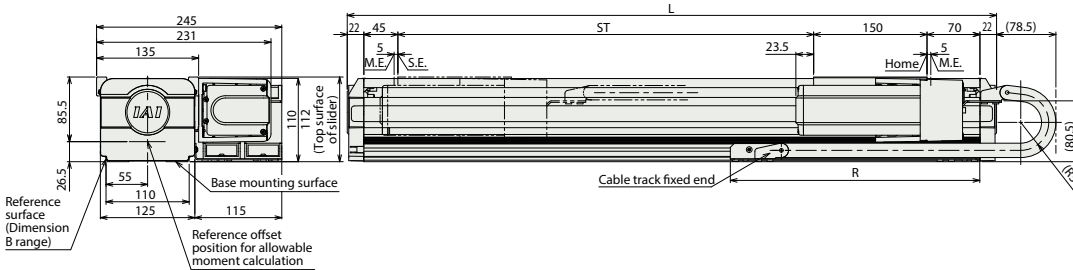
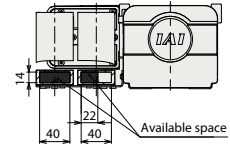
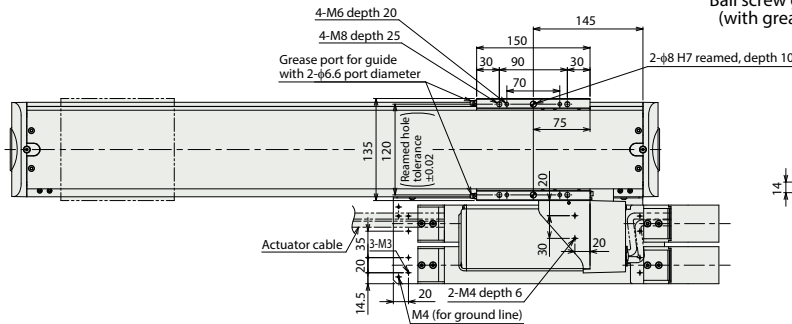
(Note) Connect the motor cable and encoder cable to the cable joint connector.
Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.

ST: Stroke
M.E: Mechanical end
S.E: Stroke end



Detailed view of V Ball screw grease lubrication port (with grease port cap removed)



Dimensions by Stroke

Stroke	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	
L	859	909	959	1009	1059	1109	1159	1209	1259	1309	1359	1409	1459	1509	1559	1609	1659	1709	1759	1809	1859	1909	1959	2009	2059	2019	
B	815	865	915	965	1015	1065	1115	1165	1215	1265	1315	1365	1415	1465	1515	1565	1615	1665	1715	1765	1815	1865	1915	1965	2015	2065	
F	142	167	192	217	242	267	292	317	342	367	392	417	442	467	492	517	542	567	592	617	642	667	692	717	742	767	
G	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4	
H	10	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	18	18	18	18	18	18	18	18	18	22	22
J	634	684	734	784	834	884	934	984	1034	1084	1134	1184	1234	1284	1334	1384	1434	1484	1534	1584	1634	1684	1734	1784	1834	1884	
R	330	366	384	402	438	456	492	510	528	564	582	618	636	654	690	708	744	762	780	816	834	852	888	906	942	960	

Mass by Stroke

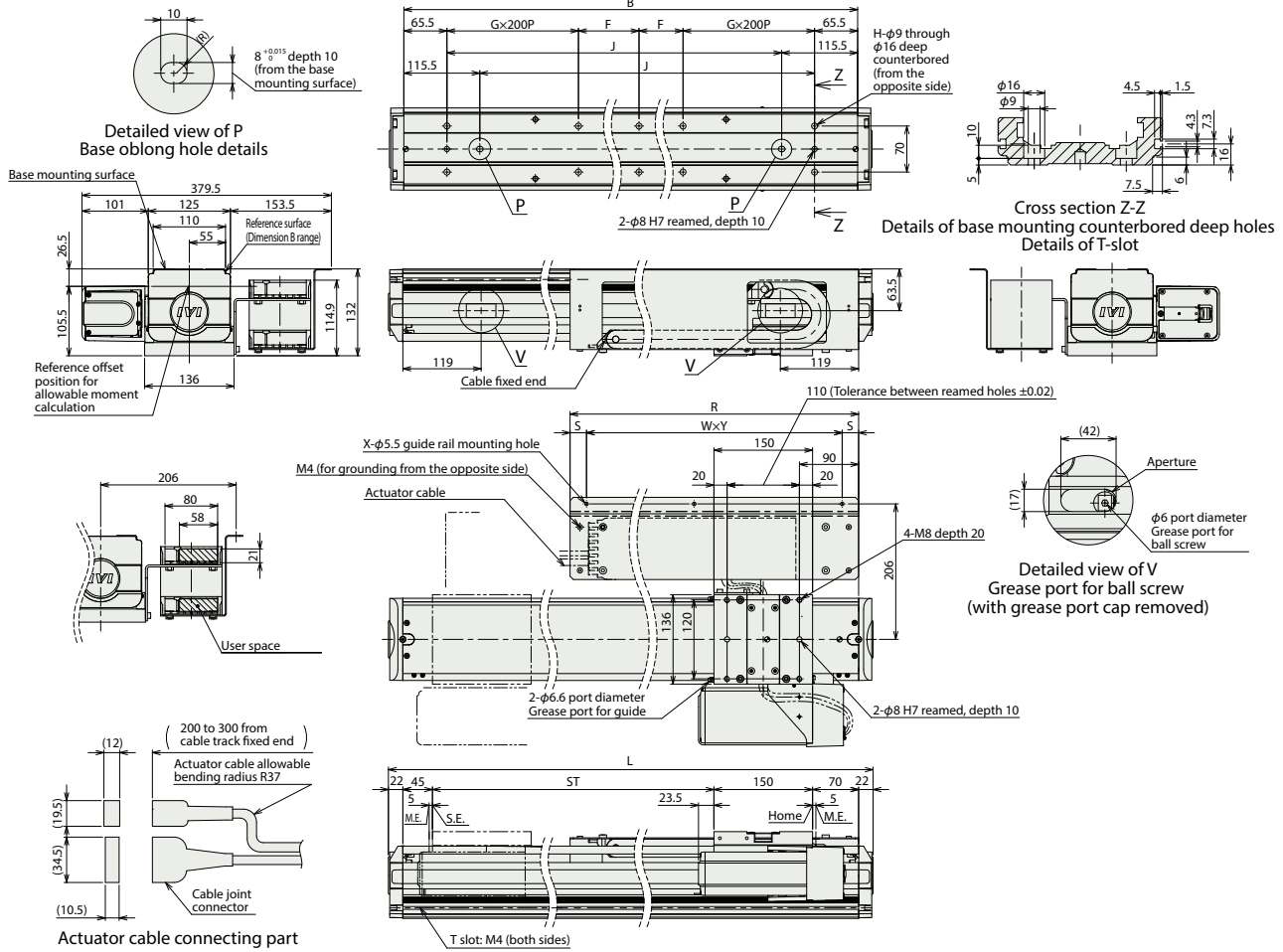
Stroke	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800
Mass (kg) With user cable track	17.3	17.9	18.6	19.2	19.8	20.4	21.1	21.7	22.3	22.9	23.5	24.2	24.8	25.4	26.0	26.6	27.2	27.9	28.5	29.1	29.4	30.0	30.7	31.3	31.9	32.5
Mass (kg) No cable track	16.5	17.1	17.7	18.2	18.8	19.4	20.0	20.5	21.1	21.6	22.2	22.8	23.3	23.9	24.5	25.0	25.6	26.1	26.7	27.3	27.3	27.9	28.5	29.0	29.6	30.1

■ NSA-MXMS_Extended cable track mounting direction (ceiling-mount, standard/ET7)

(Note) Connect the motor cable and encoder cable to the cable joint connector.
Please refer to P.70 for more information on the cable.

ST: Stroke
M.E: Mechanical end
S.E: Stroke end

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E



■ Dimensions by Stroke

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L	859	909	959	1009	1059	1109	1159	1209	1259	1309	1359	1409	1459	1509	1559	1609	1659	1709	1759	1809	1859	1909	1959	2009	2059	2109
B	815	865	915	965	1015	1065	1115	1165	1215	1265	1315	1365	1415	1465	1515	1565	1615	1665	1715	1765	1815	1865	1915	1965	2015	2065
F	142	167	192	217	242	267	292	317	342	367	392	417	442	467	492	517	542	567	592	617	642	667	692	717	742	767
G	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4
H	10	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	18	18	18	18	18	18	18	18	22	22
J	634	684	734	784	834	884	934	984	1034	1084	1134	1184	1234	1284	1334	1384	1434	1484	1534	1584	1634	1684	1734	1784	1834	1884
R	500	525	549	575	600	625	649	675	701	725	749	776	800	824	848	875	899	926	950	974	1001	1025	1049	1074	1100	1124
S	25	22.5	24.5	22.5	25	22.5	24.5	22.5	28	25	22	28	25	22	26.5	25	22	28	25	22	25.5	25	24.5	24.5	25	24.5
W	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	5	5	5	5	5	5
X	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	6	6	6	6	6	6
Y	225	240	250	265	275	290	300	315	215	225	235	240	250	260	265	275	285	290	300	310	190	195	200	205	210	215

■ Mass by Stroke

Stroke	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800
Mass (kg)	18.6	19.3	19.9	20.6	21.1	21.7	22.3	23.0	23.6	24.3	24.9	25.5	26.2	26.7	27.3	28.0	28.6	29.2	29.9	30.5	31.2	31.8	32.4	33.0	33.6	34.2

■ Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Power supply voltage	Control method														Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network option *												
				DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM				
MSCON-C		6	Single phase 100VAC/200VAC	-	-	-	●	●	-	●	●	-	-	●	●	-	-	256	Please contact IAI America for more information
RCON		16	DC24V Single phase 200VAC	-	-	-	●	●	●	-	-	-	●	●	●	-	-	128	
RSEL		8	Single phase 200VAC	-	-	●	●	●	-	-	-	●	●	-	-	-	-	36000	
SCON-CAL/CGAL		1	Single phase 100VAC/200VAC	●	-	-	●	●	●	●	●	●	●	●	●	-	-	512 (768 for network spec.)	
SCON-CB/CGB		1		●	●	-	●	●	●	●	●	●	●	●	●	-	-	512 (768 for network spec.)	
SSEL-CS		2	Single phase 200VAC Three-phase 200VAC	●	-	●	●	●	-	-	-	-	●	-	-	-	-	20000	
XSEL-P/Q		6		-	-	●	●	●	-	●	-	-	-	●	-	-	-	20000	
XSEL-RA/SA		8	-	-	●	●	●	-	●	-	-	-	●	●	-	-	-	55000 (Depending on the type)	

(Note) Refer to the P.7-17 of the General Catalog 2020 for abbreviations such as DV and CC.

NSA-MXMM

±10μm
Battery-less Absolute
Multi Slider
Body Width 130 mm
200 W

Model Specification Items

NSA - **MXMM** - **WA** - **200** - - - - - **AQ** -

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
		WA Battery-less Absolute	200 200W	30 30mm 20 20mm	300 300mm 1500 1500mm (50mm increments)	T2 SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA T4 RCON RSEL	N None S 3m M 5m X□□ Specified length	Refer to Options table below.



CE
RoHS

Horizontal
Side-mount
Ceiling-mount
Vertical-mount

Stroke

Stroke (mm)	NSA-MXMM	Stroke (mm)	NSA-MXMM
300	<input type="radio"/>	950/1000	<input type="radio"/>
350/400	<input type="radio"/>	1050/1100	<input type="radio"/>
450/500	<input type="radio"/>	1150/1200	<input type="radio"/>
550/600	<input type="radio"/>	1250/1300	<input type="radio"/>
650/700	<input type="radio"/>	1350/1400	<input type="radio"/>
750/800	<input type="radio"/>	1450/1500	<input type="radio"/>
850/900	<input type="radio"/>		

Options * Please check the Options reference pages to confirm each option.

Name	Model	Reference Page
AQ seal (equipped as standard) (Note 1)	AQ	67
Standard cable track mounting direction (standard) (Note 2)	CT3	67
Standard cable track mounting direction (opposite) (Note 2)	CT4	67
Extended cable track mounting direction (side-mount, standard) (Note 2)	ET5	67
Extended cable track mounting direction (side-mount, opposite) (Note 2)	ET6	67
Extended cable track mounting direction (ceiling-mount, standard) (Note 2)	ET7	67
Extended cable track mounting direction (ceiling-mount, opposite) (Note 2)	ET8	67
No cable track (standard) (Note 2)	NT3	68
No cable track (opposite) (Note 2)	NT4	68
User cable track mounting direction (standard) (Note 2)	UM3	68
User cable track mounting direction (opposite) (Note 2)	UM4	68

(Note 1) Be sure to fill in the Model Specification Items option column.
 (Note 2) Be sure to fill in one of the codes in the Model Specification Items option column.

Cable Length

Type	Cable Code	T2	T4
Standard	S (3m)	<input type="radio"/>	<input type="radio"/>
	M (5m)	<input type="radio"/>	<input type="radio"/>
Specified length	X06 (6m) ~ X10 (10m)	<input type="radio"/>	<input type="radio"/>
	X11 (11m) ~ X15 (15m)	<input type="radio"/>	<input type="radio"/>
	X16 (16m) ~ X20 (20m)	<input type="radio"/>	<input type="radio"/>
	X21 (21m) ~ X25 (25m)	<input type="radio"/>	<input type="radio"/>
	X26 (26m) ~ X30 (30m)	<input type="radio"/>	<input type="radio"/>

(Note) This is a robot cable.

POINT Selection Notes

- (1) The payload in the "Main Specifications" indicates the maximum value. Please refer to the "Table of Payload by Speed/Acceleration" for more details.
- (2) The center mass location of the mounted object should be less than half the overhang distance. Even when the overhang distance or load moment is within the allowable value, if abnormal vibration or noise is generated during operation, use less stringent operating conditions.
- (3) The guideline for the overhang load length is 750mm or less in the Ma, Mb and Mc directions. Please refer to P.69 for more information regarding the overhang load length.
- (4) Estimated allowable duty varies depending on the load factor. Please refer to P. 69 for more information.
- (5) Refer to P.6 for applicable mounting method.

Main Specifications

Item		Description	
Lead	Ball screw lead (mm)	30	20
	Max. payload (kg)	20	35
Horizontal	Speed/acceleration/ deceleration	Max speed (mm/s)	1800 1200
		Rated acceleration/deceleration (G)	0.3 0.3
		Max. acceleration/deceleration (G)	0.5 0.6
Thrust force	Rated thrust force (N)	113.9	170.9
	Min. stroke (mm)	300	300
Stroke	Max. stroke (mm)	1500	1500
	Stroke pitch (mm)	50	50

Item	Description
Drive system	Ball screw φ16mm rolled C5 or equivalent
Positioning repeatability	±0.01mm
Lost motion	0.02mm or less
Base	Material: Aluminum with white alumite treatment
Linear guide	Direct-acting infinite circulation type
Allowable static moment	Ma: 560N-m
	Mb: 800N-m
	Mc: 1,030N-m
Allowable dynamic moment (Note 3)	Ma: 123N-m
	Mb: 176N-m
	Mc: 227N-m
Ambient operating temp. & humidity	0 to 40°C, max. 85% RH or less (Non-condensing)
Degree of protection	-
Vibration resistance/shock resistance	4.9m/s ²
Compliant international standards	CE marking, RoHS Directive
Motor type	AC servo motor (200V)
Encoder type	Battery-less Absolute (17-bit)
Encoder pulse count	131072 pulse/rev

(Note 3) Assumes a standard rated life of 10,000km. The running life will vary depending on operation and installation conditions. Refer to P.1-180 of the General Catalog 2020 for operational life.

Slider Type Moment Direction

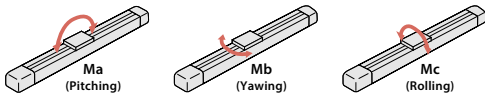


Table of Payload by Speed/Acceleration

The payload is in units of kg.

Lead (mm)	Max speed (mm/s)	Acceleration (G)			
		0.3	0.4	0.5	0.6
30	1800	20	10	5	-
20	1200	35	25	15	5

Stroke and Max Speed

Stroke	300~1500 (50mm increments)
Lead	
30	1800
20	1200

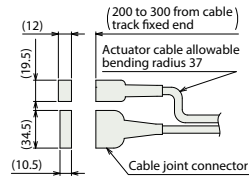
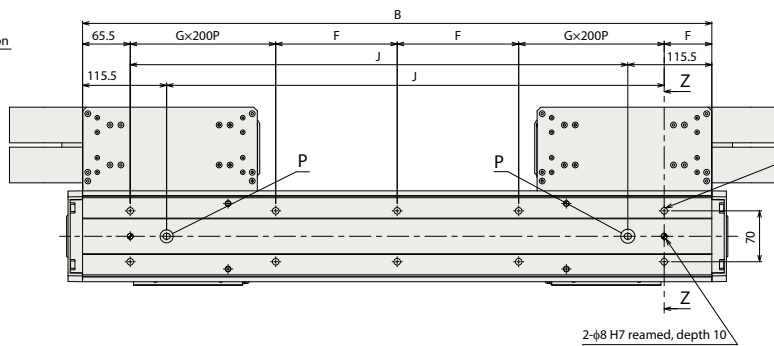
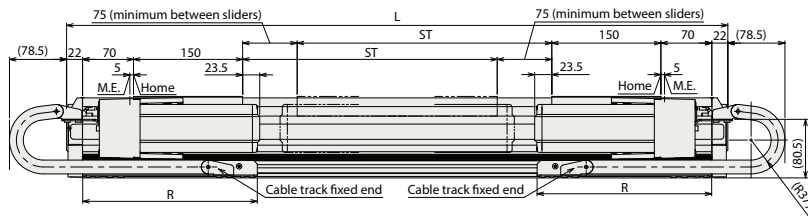
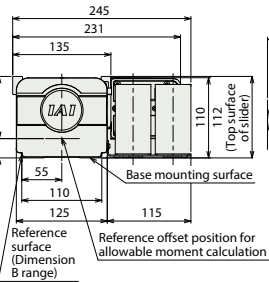
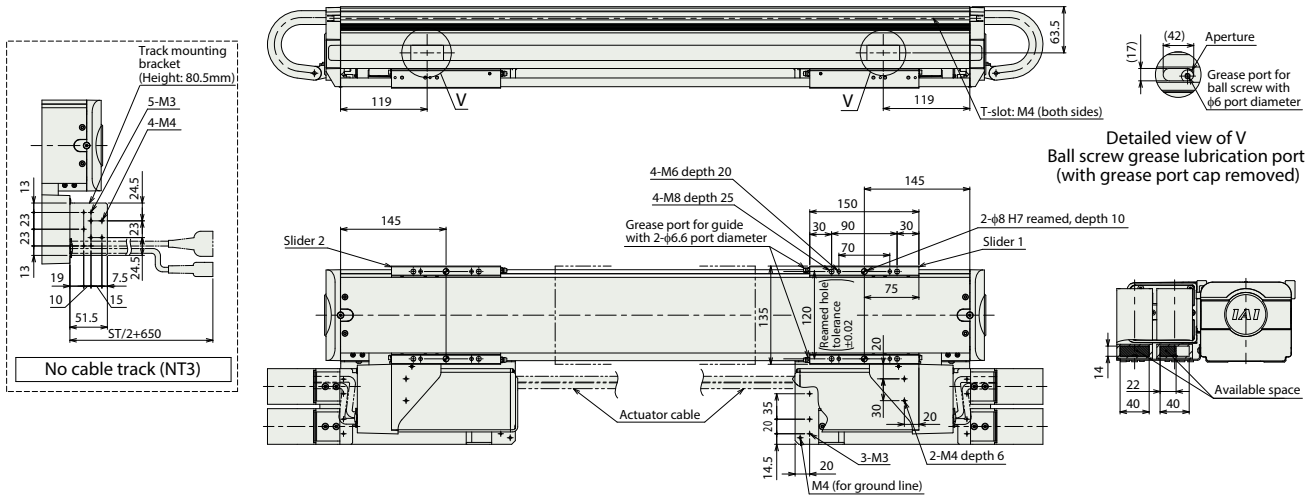
(Unit: mm/s)

NSA-MXMM User Cable Track Mounting Direction (standard/UM3)

(Note) Connect the motor cable and encoder cable to the cable joint connector.
Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.

ST: Stroke
M.E: Mechanical end



Actuator cable connecting part

Dimensions by Stroke

Stroke	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	859	909	959	1009	1059	1109	1159	1209	1259	1309	1359	1409	1459	1509	1559	1609	1659	1709	1759	1809	1859	1909	1959	2009	2059
B	815	865	915	965	1015	1065	1115	1165	1215	1265	1315	1365	1415	1465	1515	1565	1615	1665	1715	1765	1815	1865	1915	1965	2015
F	142	167	192	217	242	267	292	317	142	167	192	217	242	267	292	317	142	167	192	217	242	267	292	317	142
G	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4
H	10	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	18	18	18	18	18	18	18	18	22
J	634	684	734	784	834	884	934	984	1034	1084	1134	1184	1234	1284	1334	1384	1434	1484	1534	1584	1634	1684	1734	1784	1834
R	222	240	258	294	312	330	366	384	402	438	456	492	510	528	564	582	618	636	654	690	708	744	762	780	816

Mass by Stroke

Stroke	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
With user cable track	23.8	24.4	25.0	25.8	26.4	27.1	27.8	28.4	29.1	29.8	30.4	31.2	31.8	32.5	33.2	33.9	34.6	35.2	35.9	36.6	37.2	38.0	38.6	39.2	40.0
No cable track	22.7	23.3	23.8	24.4	25.0	25.5	26.1	26.7	27.2	27.8	28.4	29.0	29.5	30.1	30.6	31.2	31.8	32.3	32.9	33.5	34.1	34.6	35.2	35.8	36.3

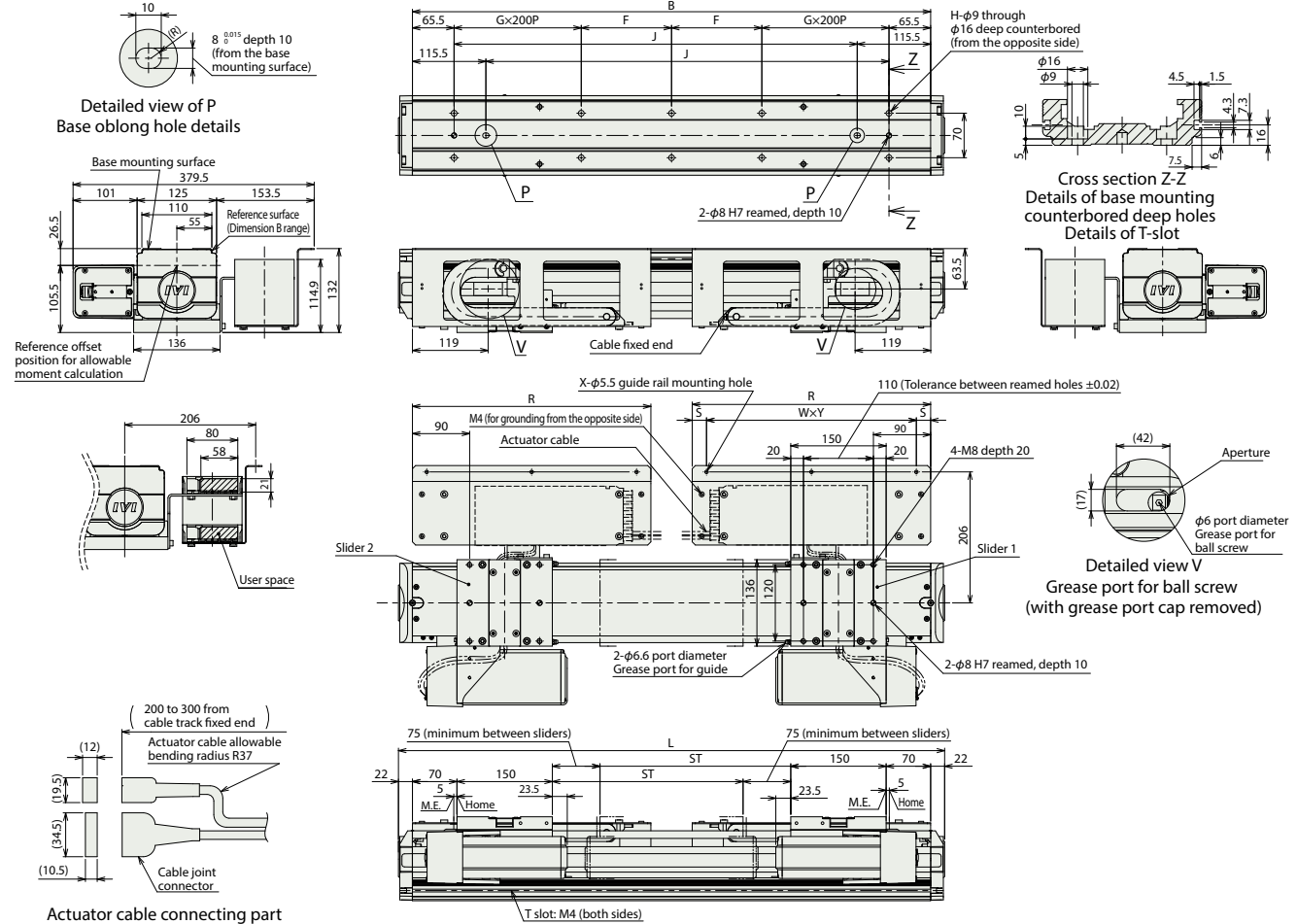
■ NSA-MXMM_Extended cable track mounting direction (ceiling-mount, standard/ET7)

(Note) Connect the motor cable and encoder cable to the cable joint connector.

Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E

ST: Stroke
M.E: Mechanical end



■ Dimensions by Stroke

Stroke	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	859	909	959	1009	1059	1109	1159	1209	1259	1309	1359	1409	1459	1509	1559	1609	1659	1709	1759	1809	1859	1909	1959	2009	2059
B	815	865	915	965	1015	1065	1115	1165	1215	1265	1315	1365	1415	1465	1515	1565	1615	1665	1715	1765	1815	1865	1915	1965	2015
F	142	167	192	217	242	267	292	317	342	367	392	417	442	467	492	517	542	567	592	617	642	667	692	717	742
G	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4
H	10	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	18	18	18	18	18	18	18	18	22
J	634	684	734	784	834	884	934	984	1034	1084	1134	1184	1234	1284	1334	1384	1434	1484	1534	1584	1634	1684	1734	1784	1834
R	375	400	425	449	475	500	525	549	575	600	625	649	675	701	725	749	776	800	824	848	875	899	926	950	974
S	22.5	25	22.5	24.5	22.5	25	22.5	24.5	22.5	25	22.5	24.5	22.5	28	25	22	28	25	22	26.5	25	22	28	25	22
W	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3
X	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4
Y	165	175	190	200	215	225	240	250	265	275	290	300	315	215	225	235	240	250	260	265	275	285	290	300	310

■ Mass by Stroke

Stroke	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
Mass (kg)	25.9	26.7	27.4	28.1	28.8	29.5	30.2	30.9	31.7	32.1	32.8	33.5	34.3	35.0	35.7	36.4	37.1	37.8	38.3	39.0	39.7	40.4	41.1	41.9	42.6

■ Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Power supply voltage	Control method														Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network option *												
				DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM				
MSCON-C		6	Single phase 100VAC/200VAC	-	-	-	●	●	-	●	●	-	-	●	●	-	-	256	Please contact IAI America for more information
RCON		16	DC24V Single phase 200VAC	-	-	-	●	●	●	-	-	-	●	●	-	-	128		
RSEL		8	Single phase 200VAC	-	-	●	●	●	●	-	-	-	●	●	-	-	36000		
SCON-CAL/CGAL		1	Single phase 100VAC/200VAC	●	-	-	●	●	●	●	-	-	●	●	-	-	512 (768 for network spec.)		
SCON-CB/CGB		1		●	●	-	●	●	●	●	●	●	●	●	●	-	-	512 (768 for network spec.)	
SSEL-CS		2	●	-	●	●	●	-	●	-	-	-	●	-	-	-	20000		
XSEL-P/Q		6	Single phase 200VAC	-	-	●	●	●	●	-	-	-	-	●	-	-	20000		
XSEL-RA/SA		8	Three-phase 200VAC	-	-	●	●	●	●	-	-	-	-	●	●	-	-	55000 (Depending on the type)	

(Note) Refer to the P.1-17 of the General Catalog 2020 for abbreviations such as DV and CC.
(Note) The multi-slider is controlled by either a 2-axis controller or two SCONs.

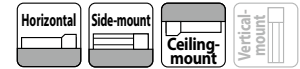
NSA-LXMS

$\pm 10\mu\text{m}$	Battery-less Absolute	Body Width 150 mm	400 W
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Model Specification Items

NSA - LXMS - WA - 400 - [] - [] - [] - [] - AQ - []

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
		WA Battery-less Absolute	400 400W	40 40mm 20 20mm	600 600mm 2250 2250mm (50mm increments)	T2 SCOM SSEL XSEL-P/Q XSEL-RA/SA T4 RCON RSEL	N None S 3m M 5m X□□ Specified length	Refer to Options table below.



Stroke (mm)	NSA-LXMS	Stroke (mm)	NSA-LXMS
600	<input type="radio"/>	1450/1500	<input type="radio"/>
650/700	<input type="radio"/>	1550/1600	<input type="radio"/>
750/800	<input type="radio"/>	1650/1700	<input type="radio"/>
850/900	<input type="radio"/>	1750/1800	<input type="radio"/>
950/1000	<input type="radio"/>	1850/1900	<input type="radio"/>
1050/1100	<input type="radio"/>	1950/2000	<input type="radio"/>
1150/1200	<input type="radio"/>	2050/2100	<input type="radio"/>
1250/1300	<input type="radio"/>	2150/2200	<input type="radio"/>
1350/1400	<input type="radio"/>	2250	<input type="radio"/>

POINT Selection Notes

- The payload in the "Main Specifications" indicates the maximum value. Please refer to the "Table of Payload by Speed/Acceleration" for more details.
- The center mass location of the mounted object should be less than half the overhang distance. Even when the overhang distance or load moment is within the allowable value, if abnormal vibration or noise is generated during operation, use less stringent operating conditions.
- The guideline for the overhang load length is 900mm or less in the Ma, Mb and Mc directions. Please refer to P.69 for more information regarding the overhang load length.
- Estimated allowable duty varies depending on the load factor. Please refer to P. 69 for more information.
- Refer to P.6 for applicable mounting method.

Options * Please check the Options reference pages to confirm each option.

Name	Model	Reference Page
AQ seal (equipped as standard) (Note 1)	AQ	67
Standard cable track mounting direction (standard) (Note 2)	CT3	67
Standard cable track mounting direction (opposite) (Note 2)	CT4	67
Extended cable track mounting direction (side-mount, standard) (Note 2)	ET5	67
Extended cable track mounting direction (side-mount, opposite) (Note 2)	ET6	67
Extended cable track mounting direction (ceiling-mount, standard) (Note 2)	ET7	67
Extended cable track mounting direction (ceiling-mount, opposite) (Note 2)	ET8	67
Non-motor end specification	NM	68
No cable track (standard) (Note 2)	NT3	68
No cable track (opposite) (Note 2)	NT4	68
User cable track mounting direction (standard) (Note 2)	UM3	68
User cable track mounting direction (opposite) (Note 2)	UM4	68

(Note 1) Be sure to fill in the Model Specification Items option column.
 (Note 2) Be sure to fill in one of the codes in the Model Specification Items option column.

Type	Cable Code	T2	T4
Standard	S(3m)	<input type="radio"/>	<input type="radio"/>
	M(5m)	<input type="radio"/>	<input type="radio"/>
Specified length	X06(6m) ~ X10(10m)	<input type="radio"/>	<input type="radio"/>
	X11(11m) ~ X15(15m)	<input type="radio"/>	<input type="radio"/>
	X16(16m) ~ X20(20m)	<input type="radio"/>	<input type="radio"/>
	X21(21m) ~ X25(25m)	<input type="radio"/>	<input type="radio"/>
	X26(26m) ~ X30(30m)	<input type="radio"/>	<input type="radio"/>

(Note) This is a robot cable.

Main Specifications

Item		Description	
Lead	Ball screw lead (mm)	40	20
	Max. payload (kg)	40	80
Horizontal	Speed/acceleration/ deceleration	Max speed (mm/s)	2400
		Rated acceleration/deceleration (G)	0.3
		Max. acceleration/deceleration (G)	0.8
Thrust force	Rated thrust force (N)	169.6	339.1
	Min. stroke (mm)	600	600
Stroke	Max. stroke (mm)	2250	2250
	Stroke pitch (mm)	50	50

Item	Description
Drive system	Ball screw φ20mm rolled C5 or equivalent
Positioning repeatability	±0.01mm
Lost motion	0.02mm or less
Base	Material: Aluminum with white alumite treatment
Linear guide	Direct-acting infinite circulation type
Allowable static moment	Ma: 774N-m
	Mb: 1,106N-m
	Mc: 1,566N-m
Allowable dynamic moment (Note 3)	Ma: 162N-m
	Mb: 231N-m
	Mc: 327N-m
Ambient operating temp. & humidity	0 to 40°C, max. 85% RH or less (Non-condensing)
Degree of protection	-
Vibration resistance/shock resistance	4.9m/s ²
Compliant international standards	CE marking, RoHS Directive
Motor type	AC servo motor (200V)
Encoder type	Battery-less Absolute (17-bit)
Encoder pulse count	131072 pulse/rev

(Note 3) Assumes a standard rated life of 10,000km. The running life will vary depending on operation and installation conditions. Refer to P.1-180 of the General Catalog 2020 for operational life.

Slider Type Moment Direction

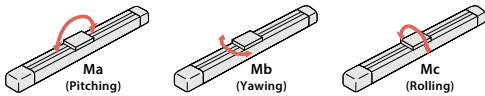


Table of Payload by Speed/Acceleration

The payload is in units of kg.

Lead (mm)	Max speed (mm/s)	Acceleration (G)						
		0.3	0.4	0.5	0.6	0.7	0.8	0.9
40	2400	40	30	20	15	10	7	-
20	1300	80	60	40	30	20	15	7

Stroke and Max Speed

Stroke	600~2250 (50mm increments)
Lead	
40	2400
20	1300

(Unit: mm/s)

NSA-LXMS_Extended cable track mounting direction (side-mount, standard/ETS)

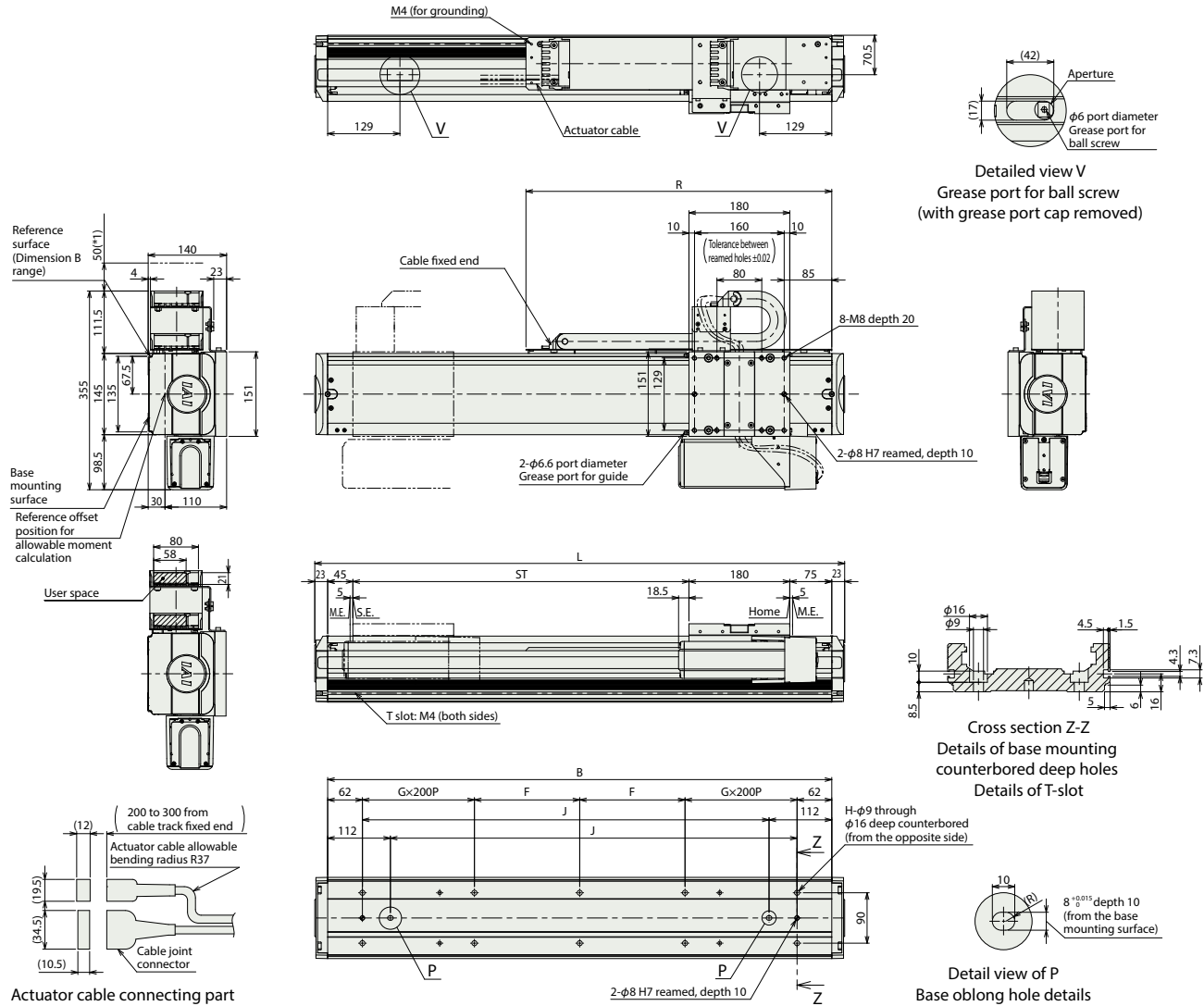
*1 Keep an appropriate space around the cable track as it may swell.

(Note) Connect the motor cable and encoder cable to the cable joint connector.

Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E

ST: Stroke
M.E: Mechanical end
S.E: Stroke end



Dimensions by Stroke

Stroke	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	
L	946	996	1046	1096	1146	1196	1246	1296	1346	1396	1446	1496	1546	1596	1646	1696	1746	1796	1846	1896	1946	1996	2046	2096	2146	2196	2246	2296	2346	2396	2446	2496	2546	2596	
B	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	
F	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563	588	613	638	663	688	713	738	763	788	813	838	863	888	913	938	963	988	1013	
G	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5	
H	10	10	10	10	10	10	14	14	14	14	14	14	14	14	18	18	18	18	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26	26	26
J	726	776	826	876	926	976	1026	1076	1126	1176	1226	1276	1326	1376	1426	1476	1526	1576	1626	1676	1726	1776	1826	1876	1926	1976	2026	2076	2126	2176	2226	2276	2326	2376	
R	546	572	597	621	646	672	698	722	746	773	797	821	845	872	896	923	947	971	998	1022	1046	1072	1098	1122	1146	1172	1196	1222	1246	1272	1296	1322	1346	1372	

Mass by Stroke

Stroke	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250
Mass (kg)	24.9	25.6	26.4	27.2	27.9	28.7	29.5	30.3	31.0	31.8	32.5	33.3	34.1	34.8	35.6	36.3	37.1	37.8	38.6	39.4	40.2	41.0	41.7	42.5	43.2	44.0	44.7	45.5	46.3	47.0	47.8	48.6	49.4	50.1

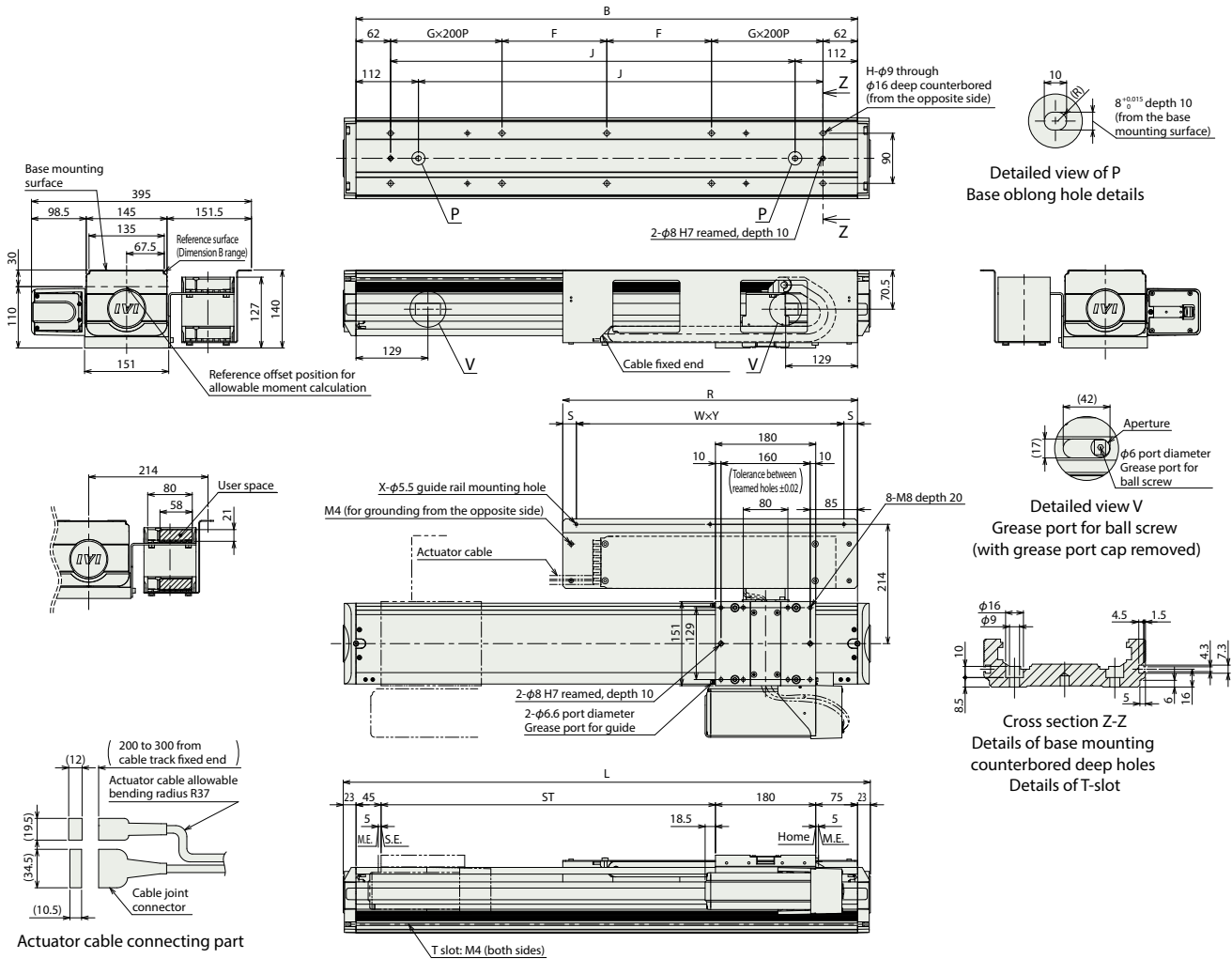
■ NSA-LXMS_Extended cable track mounting direction (ceiling-mount, standard/ET7)

(Note) Connect the motor cable and encoder cable to the cable joint connector.

Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E

ST: Stroke
M.E: Mechanical end
S.E: Stroke end



■ Dimensions by Stroke

Stroke	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250
L	946	996	1046	1096	1146	1196	1246	1296	1346	1396	1446	1496	1546	1596	1646	1696	1746	1796	1846	1896	1946	1996	2046	2096	2146	2196	2246	2296	2346	2396	2446	2496	2546	2596
B	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
F	188	213	238	263	288	313	138	163	188	213	238	263	288	313	138	163	188	213	238	263	288	313	138	163	188	213	238	263	288	313	138	163	188	213
G	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5
H	10	10	10	10	10	10	14	14	14	14	14	14	14	14	18	18	18	18	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26	26
J	726	776	826	876	926	976	1026	1076	1126	1176	1226	1276	1326	1376	1426	1476	1526	1576	1626	1676	1726	1776	1826	1876	1926	1976	2026	2076	2126	2176	2226	2276	2326	2376
R	529	555	580	604	629	655	680	704	728	755	779	806	830	854	881	906	930	954	981	1005	1029	1056	1080	1104	1128	1154	1180	1204	1228	1254	1280	1304	1328	1354
S	24.5	22.5	25	27	24.5	22.5	25	22	26.5	25	22	28	25	22	28	23	25	27	28	27.5	27	28	27.5	27	26.5	27	27.5	27	26.5	27	27.5	27	26.5	27
W	2	2	2	2	2	2	2	3	3	3	3	3	3	3	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
X	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Y	240	255	265	275	290	305	315	220	225	235	245	250	260	270	275	215	220	225	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260

■ Mass by Stroke

Stroke	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250
Mass (kg)	25.5	26.3	27.1	27.9	28.7	29.5	30.2	31.0	31.8	32.6	33.4	34.2	35.0	35.8	36.6	37.3	38.1	38.9	39.7	40.5	41.3	42.2	42.9	43.7	44.5	45.2	46.0	46.8	47.6	48.5	49.2	50.0	50.9	51.7

■ Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Power supply voltage	Control method																Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network option *														
				DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM						
RCON		16	DC24V Single phase 200VAC	●	●	●	●	●	●	●	●	●	●	●	●	●	128	Please contact IAI America for more information			
RSEL		8	Single phase 200VAC	●	●	●	●	●	●	●	●	●	●	●	●	36000					
SCON-CB/CGB		1	Single phase 200VAC	●	●	●	●	●	●	●	●	●	●	●	●	512 (768 for network spec.)					
SSEL-CS		2	Single phase 100VAC/200VAC	●	●	●	●	●	●	●	●	●	●	●	●	20000					
XSEL-P/Q		6	Single phase 200VAC	●	●	●	●	●	●	●	●	●	●	●	●	20000					
XSEL-RA/SA		8	Three-phase 200VAC	●	●	●	●	●	●	●	●	●	●	●	●	55000 (Depending on the type)					

(Note) Refer to the P.7-17 of the General Catalog 2020 for abbreviations such as DV and CC.

NSA-LXMM

±10μm

Battery-less Absolute

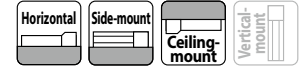
Multi Slider

Body Width
150 mm

400 W

Model Specification Items

NSA	LXMM	WA	400						AQ	
Series	Type	Encoder Type WA Battery-less Absolute	Motor Type 400 400W	Lead 40 40mm 20 20mm	Stroke 300 300mm 2250 2250mm (50mm increments)	Applicable Controllers T2 SCON SSEL XSEL-P/Q XSEL-RA/SA T4 RCON RSEL	Cable Length N None S 3m M 5m X□□ Specified length	Options Refer to Options table below.		



Stroke			
Stroke (mm)	NSA-LXMM	Stroke (mm)	NSA-LXMM
300/350	○	1300/1350	○
400/450	○	1400/1450	○
500/550	○	1500/1550	○
600/650	○	1600/1650	○
700/750	○	1700/1750	○
800/850	○	1800/1850	○
900/950	○	1900/1950	○
1000/1050	○	2000/2050	○
1100/1150	○	2100/2150	○
1200/1250	○	2200/2250	○

POINT
Selection Notes

- (1) The payload in the "Main Specifications" indicates the maximum value. Please refer to the "Table of Payload by Speed/Acceleration" for more details.
- (2) The center mass location of the mounted object should be less than half the overhang distance. Even when the overhang distance or load moment is within the allowable value, if abnormal vibration or noise is generated during operation, use less stringent operating conditions.
- (3) The guideline for the overhang load length is 900mm or less in the Ma, Mb and Mc directions. Please refer to P.69 for more information regarding the overhang load length.
- (4) Estimated allowable duty varies depending on the load factor. Please refer to P. 69 for more information.
- (5) Refer to P.6 for applicable mounting method.

Options * Please check the Options reference pages to confirm each option.		
Name	Model	Reference Page
AQ seal (equipped as standard) (Note 1)	AQ	67
Standard cable track mounting direction (standard) (Note 2)	CT3	67
Standard cable track mounting direction (opposite) (Note 2)	CT4	67
Extended cable track mounting direction (side-mount, standard) (Note 2)	ET5	67
Extended cable track mounting direction (side-mount, opposite) (Note 2)	ET6	67
Extended cable track mounting direction (ceiling-mount, standard) (Note 2)	ET7	67
Extended cable track mounting direction (ceiling-mount, opposite) (Note 2)	ET8	67
No cable track (standard) (Note 2)	NT3	68
No cable track (opposite) (Note 2)	NT4	68
User cable track mounting direction (standard) (Note 2)	UM3	68
User cable track mounting direction (opposite) (Note 2)	UM4	68

(Note 1) Be sure to fill in the Model Specification Items option column.
 (Note 2) Be sure to fill in one of the codes in the Model Specification Items option column.

Cable Length			
Type	Cable Code	T2	T4
Standard	S (3m)	○	○
	M (5m)	○	○
Specified length	X06 (6m) ~ X10 (10m)	○	○
	X11 (11m) ~ X15 (15m)	○	○
	X16 (16m) ~ X20 (20m)	○	○
	X21 (21m) ~ X25 (25m)	○	○
	X26 (26m) ~ X30 (30m)	○	○

(Note) This is a robot cable.

Main Specifications

Item		Description	
Lead	Ball screw lead (mm)	40	20
	Max. payload (kg)	40	80
Horizontal	Speed/acceleration/ deceleration	Max speed (mm/s)	2400
		Rated acceleration/deceleration (G)	0.3
		Max. acceleration/deceleration (G)	0.8
Thrust force	Rated thrust force (N)	169.6	339.1
	Min. stroke (mm)	300	300
Stroke	Max. stroke (mm)	2250	2250
	Stroke pitch (mm)	50	50

Item	Description
Drive system	Ball screw ϕ 20mm rolled C5 or equivalent
Positioning repeatability	\pm 0.01mm
Lost motion	0.02mm or less
Base	Material: Aluminum with white alumite treatment
Linear guide	Direct-acting infinite circulation type
Allowable static moment	Ma: 774N-m
	Mb: 1,106N-m
	Mc: 1,566N-m
Allowable dynamic moment (Note 3)	Ma: 162N-m
	Mb: 231N-m
	Mc: 327N-m
Ambient operating temp. & humidity	0 to 40°C, max. 85% RH or less (Non-condensing)
Degree of protection	-
Vibration resistance/shock resistance	4.9m/s ²
Compliant international standards	CE marking, RoHS Directive
Motor type	AC servo motor (200V)
Encoder type	Battery-less Absolute (17-bit)
Encoder pulse count	131072 pulse/rev

(Note 3) Assumes a standard rated life of 10,000km. The running life will vary depending on operation and installation conditions. Refer to P.1-180 of the General Catalog 2020 for operational life.

Slider Type Moment Direction

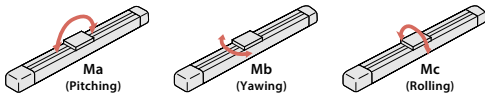


Table of Payload by Speed/Acceleration

The payload is in units of kg.

Lead (mm)	Max speed (mm/s)	Acceleration (G)						
		0.3	0.4	0.5	0.6	0.7	0.8	0.9
40	2400	40	30	20	15	10	7	-
20	1300	80	60	40	30	20	15	7

Stroke and Max Speed

Stroke	300~2250 (50mm increments)
Lead	
40	2400
20	1300

(Unit: mm/s)

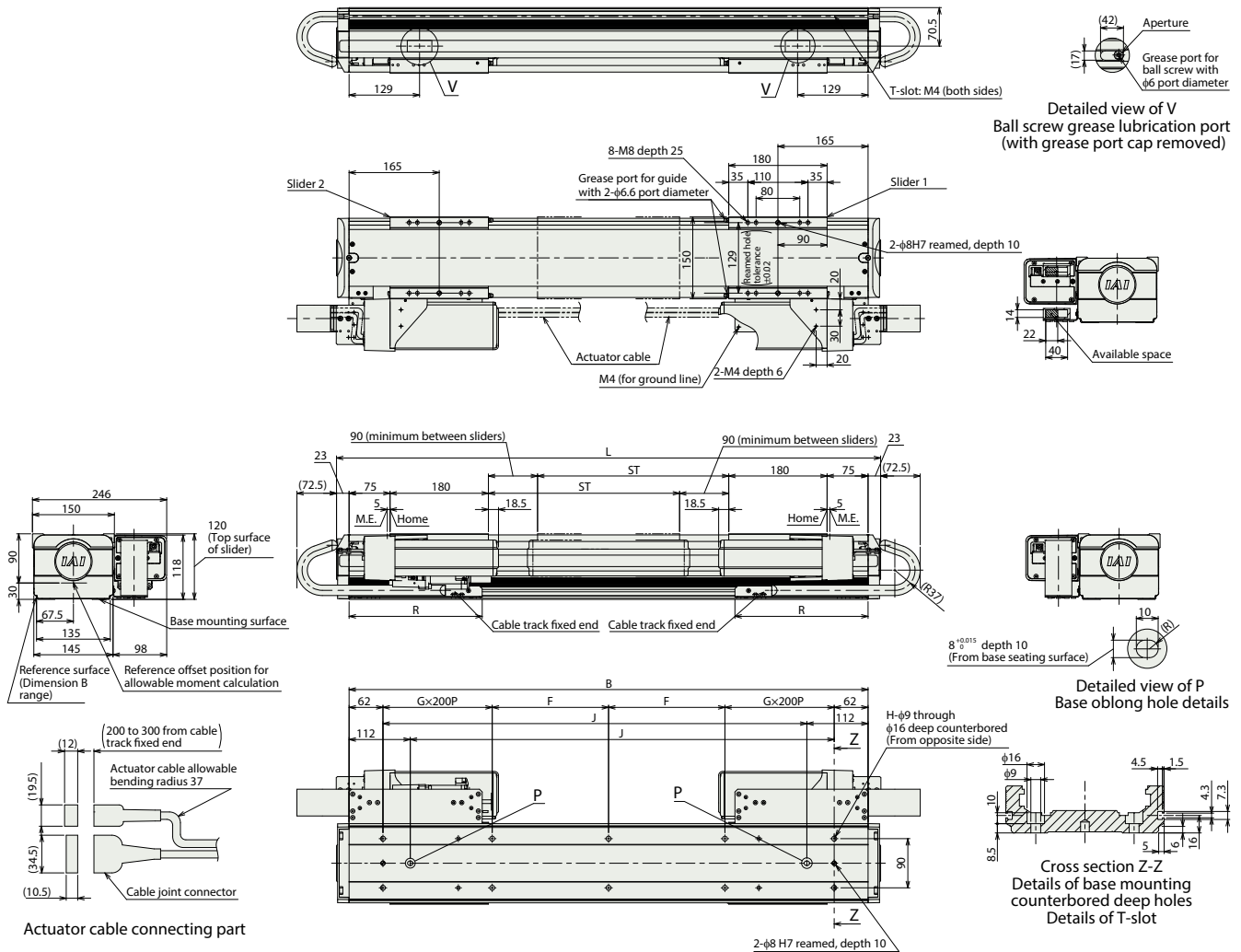
■ NSA-LXMM_Standard Cable Track Mounting Direction (standard/CT3)

(Note) Connect the motor cable and encoder cable to the cable joint connector.

Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.

ST: Stroke
M.E: Mechanical end



■ Dimensions by Stroke

Stroke	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250
L	946	996	1046	1096	1146	1196	1246	1296	1346	1396	1446	1496	1546	1596	1646	1696	1746	1796	1846	1896	1946	1996	2046	2096	2146	2196	2246	2296	2346	2396	2446	2496	2546	2596	2646	2696	2746	2796	2846	2896
B	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850
F	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563	588	613	638	663	688	713	738	763	788	813	838	863	888	913	938	963	988	1013	1038	1063	1088	1113	1138	1163
G	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	6	6
H	10	10	10	10	10	10	14	14	14	14	14	14	14	14	18	18	18	18	18	18	18	18	22	22	22	22	22	22	22	26	26	26	26	26	26	26	26	26	30	30
J	726	776	826	876	926	976	1026	1076	1126	1176	1226	1276	1326	1376	1426	1476	1526	1576	1626	1676	1726	1776	1826	1876	1926	1976	2026	2076	2126	2176	2226	2276	2326	2376	2426	2476	2526	2576	2626	2676
R	208	244	262	280	316	334	370	388	406	442	460	496	514	532	568	586	622	640	658	694	712	730	766	784	820	838	856	892	910	946	964	982	1018	1036	1072	1090	1108	1144	1162	1180

■ Mass by Stroke

Stroke	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250
Mass (kg)	31.3	32.1	32.8	33.6	34.4	35.2	36.0	36.8	37.5	38.3	39.1	39.9	40.7	41.4	42.3	43.0	43.8	44.6	45.4	46.2	47.0	47.7	48.5	49.3	50.1	50.9	51.7	52.5	53.3	54.0	54.8	55.6	56.4	57.2	58.0	58.8	59.6	60.3	61.1	61.9

NSA-LXMM_Extended cable track mounting direction (ceiling-mount, standard/ET7)

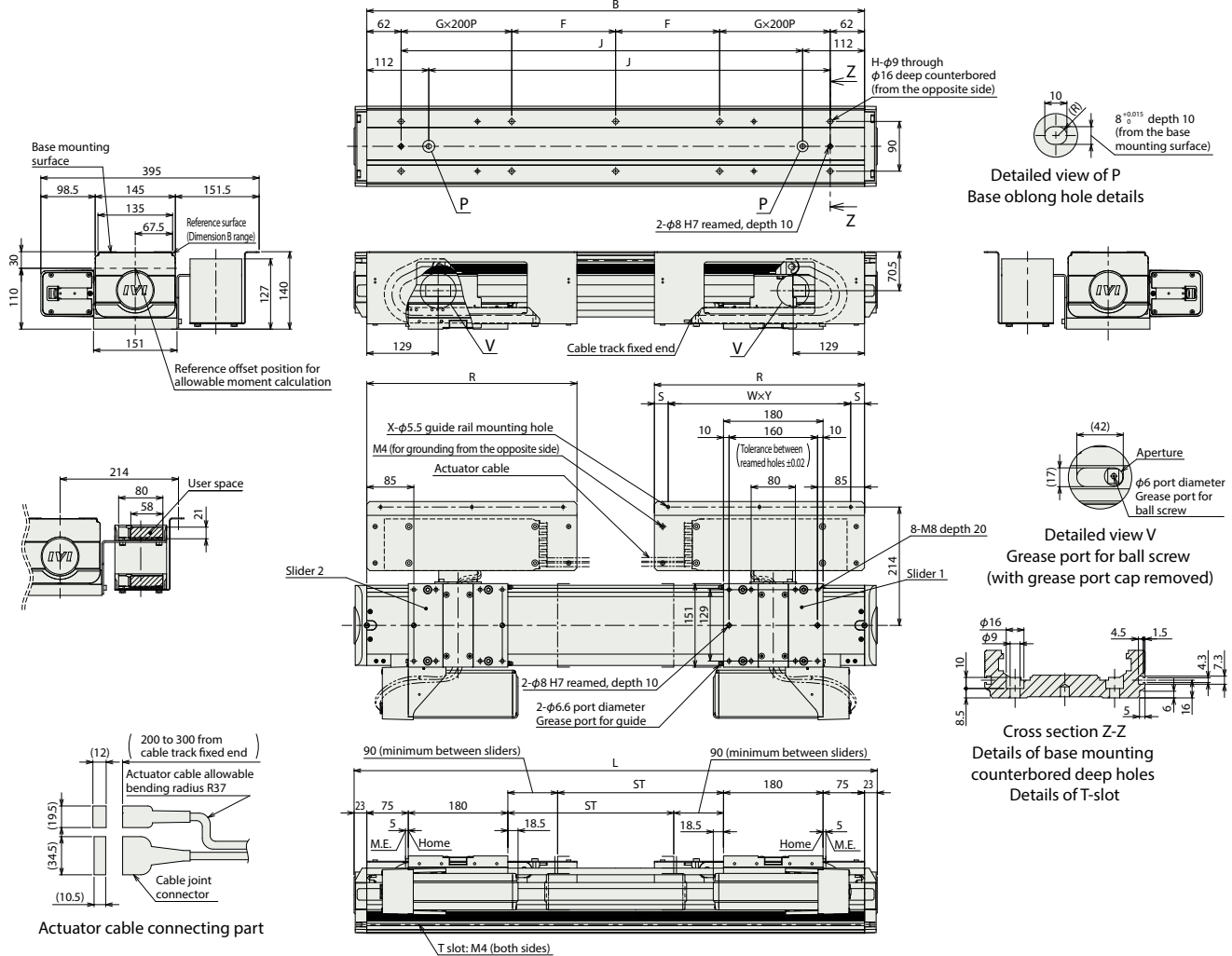
(Note) Connect the motor cable and encoder cable to the cable joint connector.

Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E

ST: Stroke

M.E: Mechanical end



Dimensions by Stroke

Stroke	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250		
L	946	996	1046	1096	1146	1196	1246	1296	1346	1396	1446	1496	1546	1596	1646	1696	1746	1796	1846	1896	1946	1996	2046	2096	2146	2196	2246	2296	2346	2396	2446	2496	2546	2596	2646	2696	2746	2796	2846	2896		
B	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850		
F	188	213	238	263	288	313	138	163	188	213	238	263	288	313	138	163	188	213	238	263	288	313	138	163	188	213	238	263	288	313	138	163	188	213	238	263	288	313	138	163		
G	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	6	6	
H	10	10	10	10	10	10	14	14	14	14	14	14	14	14	14	14	18	18	18	18	18	18	18	18	22	22	22	22	22	22	22	26	26	26	26	26	26	26	26	26	30	30
J	726	776	826	876	926	976	1026	1076	1126	1176	1226	1276	1326	1376	1426	1476	1526	1576	1626	1676	1726	1776	1826	1876	1926	1976	2026	2076	2126	2176	2226	2276	2326	2376	2426	2476	2526	2576	2626	2676		
R	380	404	429	455	480	504	529	555	580	604	629	655	680	704	728	755	779	806	830	854	881	906	930	954	981	1005	1029	1056	1080	1104	1128	1154	1180	1204	1228	1254	1280	1304	1328	1354		
S	25	27	24.5	22.5	25	27	24.5	22.5	25	27	24.5	22.5	25	27	26.5	25	22	28	25	22	28	23	25	27	28	27.5	27	28	27.5	27	26.5	27	27.5	27	26.5	27	27.5	27	26.5	27		
W	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
X	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
Y	165	175	190	205	215	225	240	255	265	275	290	305	315	220	225	235	245	250	260	270	275	215	220	225	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260		

Mass by Stroke

Stroke	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250
Mass (kg)	35.1	36.0	36.8	37.7	38.6	39.5	40.3	41.2	42.1	43.0	43.9	44.8	45.4	46.3	47.1	48.0	48.9	49.8	50.7	51.6	52.5	53.1	53.9	54.8	55.7	56.6	57.5	58.4	59.3	60.1	61.0	61.6	62.5	63.4	64.3	65.1	66.1	67.0	67.9	68.8

Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Power supply voltage	Control method												Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network option *										
				DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM		
RCON		16	DC24V Single phase 200VAC	-	-	-	-	-	-	-	-	-	-	-	-	128	Please contact IAI America for more information
RSEL		8	Single phase 200VAC	-	-	-	-	-	-	-	-	-	-	-	36000		
SCON-CB/CGB		1	Single phase 200VAC	-	-	-	-	-	-	-	-	-	-	-	512 (768 for network spec.)		
SSEL-CS		2	Single phase 100VAC/200VAC	-	-	-	-	-	-	-	-	-	-	-	20000		
XSEL-P/Q		6	Single phase 200VAC	-	-	-	-	-	-	-	-	-	-	-	20000		
XSEL-RA/SA		8	Three-phase 200VAC	-	-	-	-	-	-	-	-	-	-	-	55000 (Depending on the type)		

(Note) Refer to the P.7-17 of the General Catalog 2020 for abbreviations such as DV and CC.

(Note) The multi-slider is controlled by either a 2-axis XSEL controller or two sets of SCONs or SSELs.

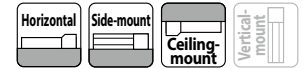
NSA-LXMXS

±10μm
Battery-less Absolute
Supporting mechanism
Body Width 150 mm
400 W

Model Specification Items

NSA - **LXMXS** - **WA** - **400** - - - - - **AQ** -

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
NSA	LXMXS	WA Battery-less Absolute	400 400W	40 40mm 20 20mm	2300 2300mm 3000 3000mm (50mm increments)	T2 SCON SSEL XSEL-P/Q XSEL-RA/SA T4 RCON RSEL	N None S 3m M 5m X□□ Specified length	Refer to Options table below.



Stroke (mm)	NSA-LXMX S
2300	<input type="radio"/>
2350/2400	<input type="radio"/>
2450/2500	<input type="radio"/>
2550/2600	<input type="radio"/>
2650/2700	<input type="radio"/>
2750/2800	<input type="radio"/>
2850/2900	<input type="radio"/>
2950/3000	<input type="radio"/>

Options * Please check the Options reference pages to confirm each option.

Name	Model	Reference Page
AQ seal (equipped as standard) (Note 1)	AQ	67
Standard cable track mounting direction (standard) (Note 2)	CT3	67
Standard cable track mounting direction (opposite) (Note 2)	CT4	67
Extended cable track mounting direction (side-mount, standard) (Note 2)	ET5	67
Extended cable track mounting direction (side-mount, opposite) (Note 2)	ET6	67
Extended cable track mounting direction (ceiling-mount, standard) (Note 2)	ET7	67
Extended cable track mounting direction (ceiling-mount, opposite) (Note 2)	ET8	67
Non-motor end specification	NM	68
No cable track (standard) (Note 2)	NT3	68
No cable track (opposite) (Note 2)	NT4	68
User cable track mounting direction (standard) (Note 2)	UM3	68
User cable track mounting direction (opposite) (Note 2)	UM4	68

(Note 1) Be sure to fill in the Model Specification Items option column.
 (Note 2) Be sure to fill in one of the codes in the Model Specification Items option column.

POINT Selection Notes

- (1) The payload in the "Main Specifications" indicates the maximum value. Please refer to the "Table of Payload by Speed/Acceleration" for more details.
- (2) The center mass location of the mounted object should be less than half the overhang distance. Even when the overhang distance or load moment is within the allowable value, if abnormal vibration or noise is generated during operation, use less stringent operating conditions.
- (3) The guideline for the overhang load length is 900mm or less in the Ma, Mb and Mc directions. Please refer to P.69 for more information regarding the overhang load length.
- (4) Estimated allowable duty varies depending on the load factor. Please refer to P.69 for more information.
- (5) Refer to P.6 for applicable mounting method.

Type	Cable Code	T2	T4
Standard	S (3m)	<input type="radio"/>	<input type="radio"/>
	M (5m)	<input type="radio"/>	<input type="radio"/>
Specified length	X06 (6m) ~ X10 (10m)	<input type="radio"/>	<input type="radio"/>
	X11 (11m) ~ X15 (15m)	<input type="radio"/>	<input type="radio"/>
	X16 (16m) ~ X20 (20m)	<input type="radio"/>	<input type="radio"/>
	X21 (21m) ~ X25 (25m)	<input type="radio"/>	<input type="radio"/>
	X26 (26m) ~ X30 (30m)	<input type="radio"/>	<input type="radio"/>

Main Specifications

Item		Description	
Lead		Ball screw lead (mm)	40 20
	Payload	Max. payload (kg)	40 80
Speed/acceleration/ deceleration		Max. speed (mm/s)	2400 1300
	Rated acceleration/deceleration (G)	0.3 0.3	
	Max. acceleration/deceleration (G)	0.8 0.9	
Thrust force		Rated thrust force (N)	169.6 339.1
		Min. stroke (mm)	2300 2300
Stroke		Max. stroke (mm)	3000 3000
		Stroke pitch (mm)	50 50

Item	Description
Drive system	Ball screw φ20mm rolled C5 or equivalent
Positioning repeatability	±0.01mm
Lost motion	Less than 0.02mm
Base	Material: Aluminum with white alumite treatment
Linear guide	Direct-acting infinite circulation type
	Ma: 774N-m
Allowable static moment	Mb: 1,106N-m
	Mc: 1,566N-m
	Ma: 162N-m
Allowable dynamic moment (Note 3)	Mb: 231N-m
	Mc: 327N-m
Ambient operating temp. & humidity	0 to 40°C, max. 85% RH or less (Non-condensing)
Degree of protection	-
Vibration resistance/shock resistance	4.9m/s ²
Compliant international standards	CE marking, RoHS Directive
Motor type	AC servo motor (200V)
Encoder type	Battery-less Absolute (17-bit)
Encoder pulse count	131072 pulse/rev

(Note 3) Assumes a standard rated life of 10,000km. The running life will vary depending on operation and installation conditions. Refer to P.1-180 of the General Catalog 2020 for operational life.

Slider Type Moment Direction

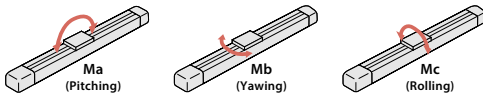


Table of Payload by Speed/Acceleration

The payload is in units of kg.

Lead (mm)	Max speed (mm/s)	Acceleration (G)						
		0.3	0.4	0.5	0.6	0.7	0.8	0.9
40	2400	40	30	20	15	10	7	-
20	1300	80	60	40	30	20	15	7

Stroke and Max Speed

Stroke	2300~3000 (50mm increments)
Lead	
40	2400
20	1300

(Unit: mm/s)

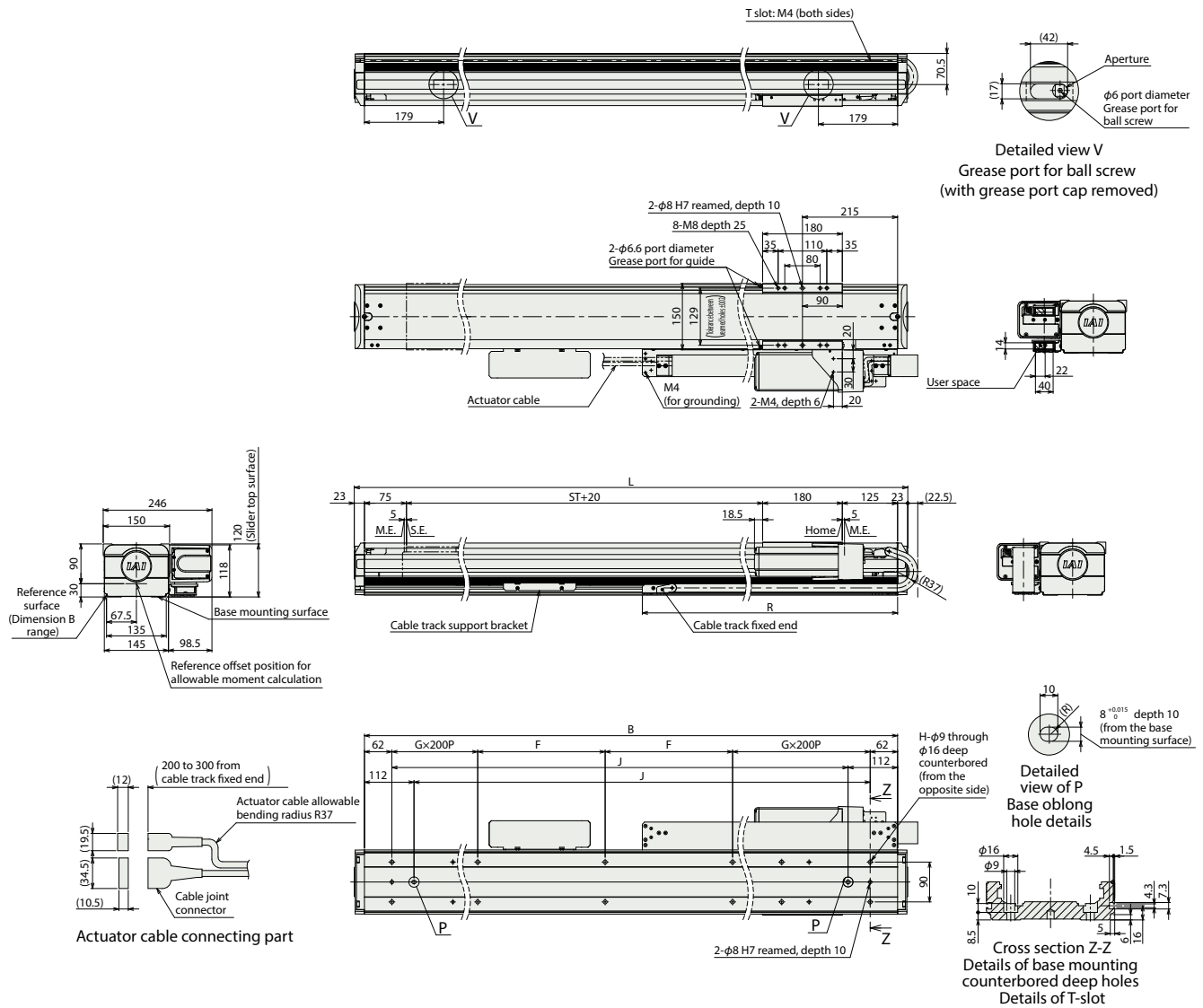
NSA-LXMXS_Standard cable track mounting direction (standard/CT3)

(Note) Connect the motor cable and encoder cable to the cable joint connector.

Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.

ST: Stroke
M.E: Mechanical end
S.E: Stroke end



Dimensions by Stroke

Stroke	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000
L	2746	2796	2846	2896	2946	2996	3046	3096	3146	3196	3246	3296	3346	3396	3446
B	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400
F	288	313	138	163	188	213	238	263	288	313	138	163	188	213	238
G	5	5	6	6	6	6	6	6	6	6	7	7	7	7	7
H	26	26	30	30	30	30	30	30	30	30	34	34	34	34	34
J	2526	2576	2626	2676	2726	2776	2826	2876	2926	2976	3026	3076	3126	3176	3226
R	1265	1283	1319	1337	1355	1391	1409	1445	1463	1481	1517	1535	1571	1589	1607

Mass by Stroke

Stroke	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000
Mass (kg)	51.6	52.4	53.2	54.0	54.7	55.5	56.1	57.0	57.8	58.5	59.3	60.1	60.8	61.6	62.3

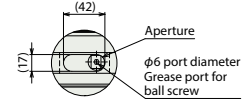
■ NSA-LXMXS_User cable track mounting direction (standard/UM3)

(Note) Connect the motor cable and encoder cable to the cable joint connector.

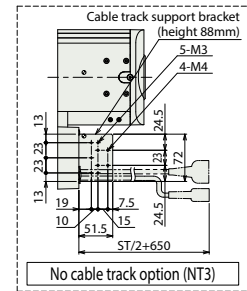
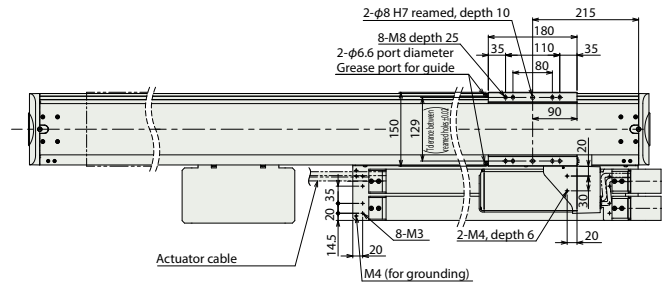
Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E

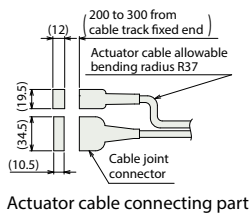
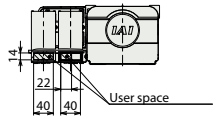
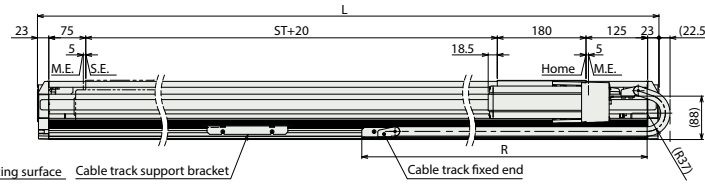
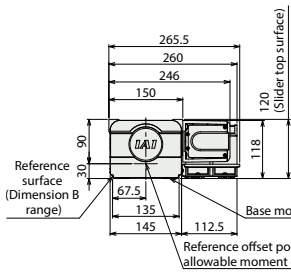
ST: Stroke
M.E: Mechanical end
S.E: Stroke end



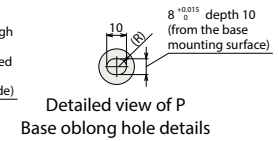
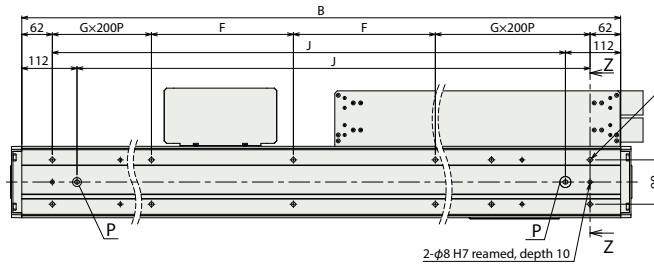
Detailed view V
Grease port for ball screw
(with grease port cap removed)



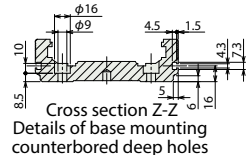
No cable track option (NT3)



Actuator cable connecting part



Detailed view of P
Base oblong hole details



Cross section Z-Z'
Details of base mounting counterbored deep holes

■ Dimensions by Stroke

Stroke	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000
L	2746	2796	2846	2896	2946	2996	3046	3096	3146	3196	3246	3296	3346	3396	3446
B	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400
F	288	313	138	163	188	213	238	263	288	313	138	163	188	213	238
G	5	5	6	6	6	6	6	6	6	6	7	7	7	7	7
H	26	26	30	30	30	30	30	30	30	30	34	34	34	34	34
J	2526	2576	2626	2676	2726	2776	2826	2876	2926	2976	3026	3076	3126	3176	3226
R	1265	1283	1319	1337	1355	1391	1409	1445	1463	1481	1517	1535	1571	1589	1607

■ Mass by Stroke

Stroke	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	
Mass (kg)	With user cable track	52.9	53.8	54.6	55.3	56.1	56.9	57.6	58.5	59.3	60.1	60.8	61.6	62.4	63.2	64.0
	No cable track	49.5	50.3	51.0	51.8	52.5	53.2	53.9	54.7	55.4	56.2	56.9	57.6	58.3	59.1	59.8

NSA-LXMXS_Extended cable track mounting direction (Side-mount, standard/ET5)

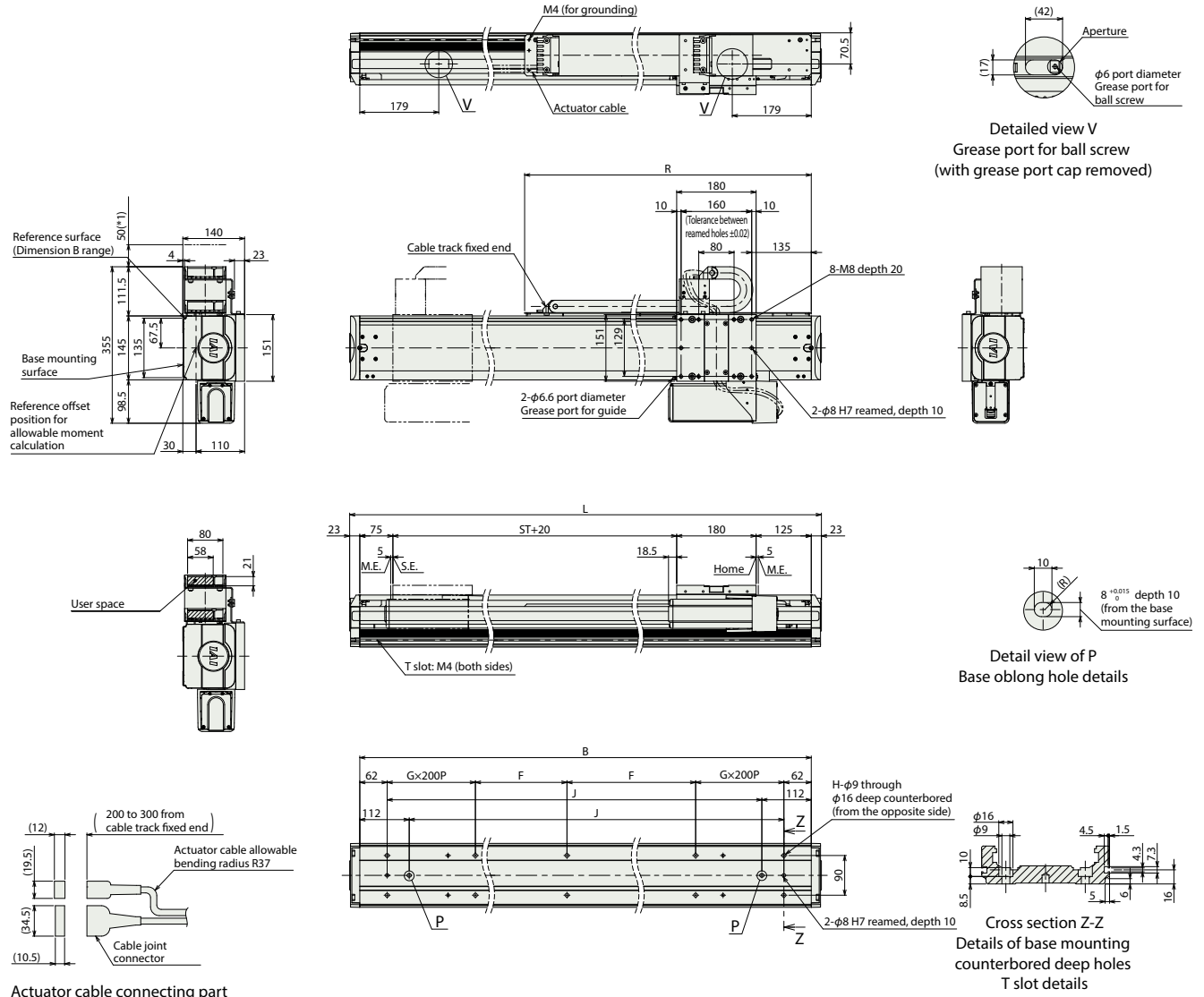
*1 Keep an appropriate space around the cable track as it may swell.

(Note) Connect the motor cable and encoder cable to the cable joint connector.

Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E

ST: Stroke
M.E: Mechanical end
S.E: Stroke end



Actuator cable connecting part

Dimensions by Stroke

Stroke	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000
L	2746	2796	2846	2896	2946	2996	3046	3096	3146	3196	3246	3296	3346	3396	3446
B	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400
F	288	313	138	163	188	213	238	263	288	313	138	163	188	213	238
G	5	5	6	6	6	6	6	6	6	6	7	7	7	7	7
H	26	26	30	30	30	30	30	30	30	30	34	34	34	34	34
J	2526	2576	2626	2676	2726	2776	2826	2876	2926	2976	3026	3076	3126	3176	3226
R	1447	1472	1496	1522	1547	1572	1596	1622	1646	1673	1697	1721	1748	1772	1796

Mass by Stroke

Stroke	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000
Mass (kg)	53.4	54.2	55.0	55.7	56.5	57.2	57.9	58.8	59.6	60.4	61.1	61.9	62.6	63.4	64.2

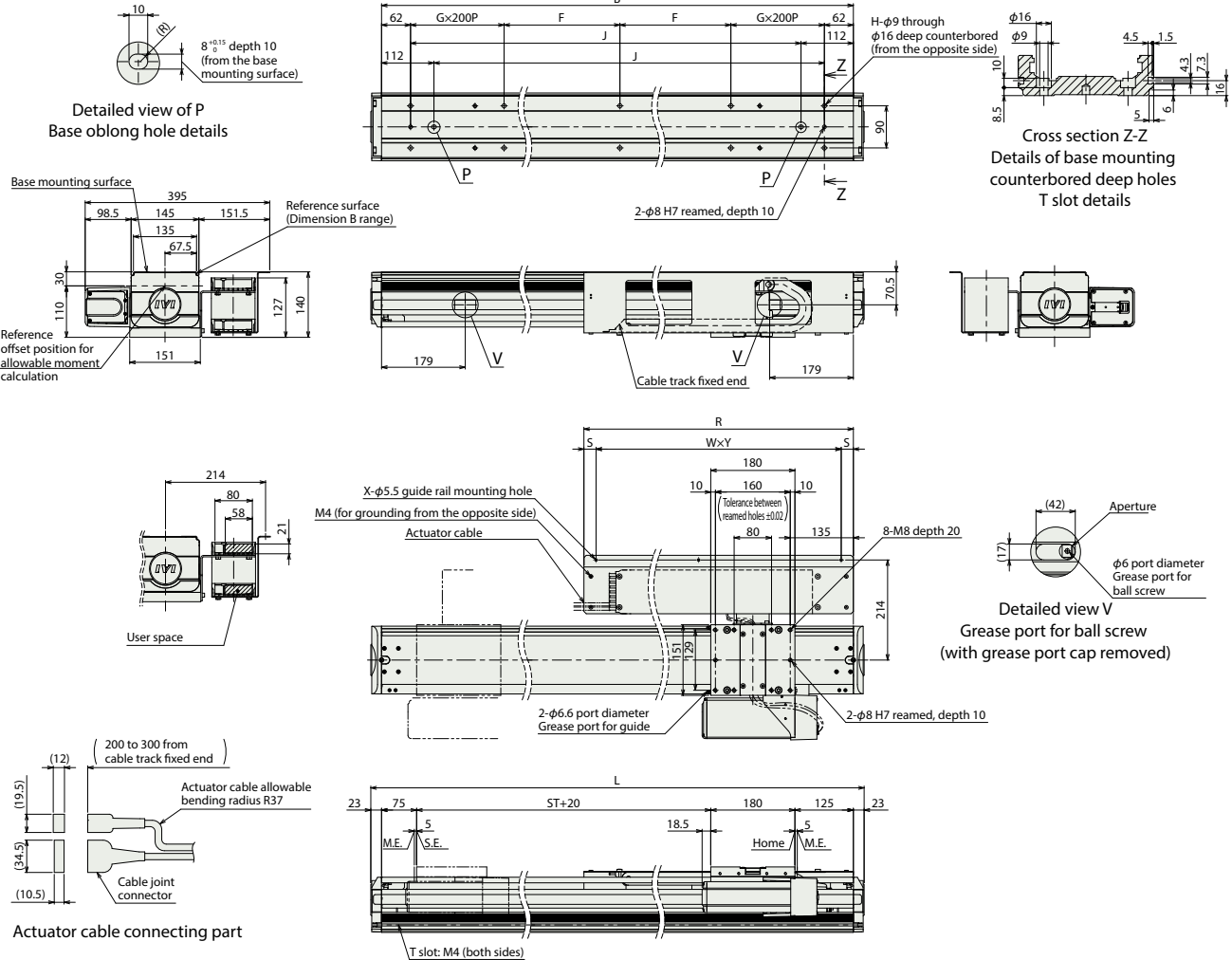
■ NSA-LXMXS_Extended cable track mounting direction (Ceiling-mount, standard/ET7)

(Note) Connect the motor cable and encoder cable to the cable joint connector.

Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E

ST: Stroke
M.E: Mechanical end
S.E: Stroke end



■ Dimensions by Stroke

Stroke	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000
L	2746	2796	2846	2896	2946	2996	3046	3096	3146	3196	3246	3296	3346	3396	3446
B	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400
F	288	313	138	163	188	213	238	263	288	313	138	163	188	213	238
G	5	5	6	6	6	6	6	6	6	6	7	7	7	7	7
H	26	26	30	30	30	30	30	30	30	30	34	34	34	34	34
J	2526	2576	2626	2676	2726	2776	2826	2876	2926	2976	3026	3076	3126	3176	3226
R	1428	1453	1477	1503	1528	1553	1577	1603	1628	1652	1676	1703	1727	1754	1778
S	26.5	26.5	26	26.5	26.5	26.5	26	26.5	26.5	31	28	26.5	23.5	22	19
W	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6
X	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7
Y	275	280	285	290	295	300	305	310	315	265	270	275	280	285	290

■ Mass by Stroke

Stroke	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000
Mass (kg)	54.9	55.8	56.6	57.4	58.2	59.0	59.7	60.6	61.3	62.1	62.9	63.7	64.5	65.3	66.2

■ Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Power supply voltage	Control method												Maximum number of positioning points	Reference page	
				Positioner	Pulse-train	Program	Network option *											
				DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM			
RCON		16	DC24V Single phase 200VAC	-	-	-	●	●	●	●	-	-	●	●	-	-	128	Please contact IAI America for more information
RSEL		8	Single phase 200VAC	-	-	●	●	●	●	-	-	●	●	●	-	-	36000	
SCON-CB/CGB		1	Single phase 200VAC	●	●	-	●	●	●	●	●	●	●	-	-	512 (768 for network spec.)		
SSEL-CS		2	Single phase 100VAC/200VAC	●	-	●	●	-	●	-	-	-	●	-	-	20000		
XSEL-P/Q		6	Single phase 200VAC	-	-	●	●	-	●	-	-	-	●	-	-	20000		
XSEL-RA/SA		8	Three-phase 200VAC	-	-	●	●	-	●	-	-	●	●	-	-	55000 (Depending on the type)		

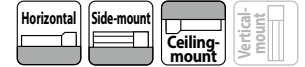
(Note) For network abbreviations such as DV and CC, refer to P.7-17 of the General Catalog 2020.

NSA-LXMXM

±10μm Standard	Battery-less Absolute	Multi Slider	Supporting mechanism	Body Width 150 mm	400 W
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Model Specification Items

NSA	LXMXM	WA	400					AQ	
Series	Type	Encoder Type WA Battery-less Absolute	Motor Type 400 400W	Lead 40 40mm 20 20mm	Stroke 2300 2300mm 2700 2700mm (50mm increments)	Applicable Controllers T2 SCON SSEL XSEL-P/Q XSEL-RA/SA T4 RCON RSEL	Cable Length N None S 3m M 5m X□□ Specified length	Options Refer to Options table below.	



Stroke (mm)	NSA-LXMXM
2300	<input type="radio"/>
2350/2400	<input type="radio"/>
2450/2500	<input type="radio"/>
2550/2600	<input type="radio"/>
2650/2700	<input type="radio"/>

Name	Model	Reference Page
AQ seal (equipped as standard) (Note 1)	AQ	67
Standard cable track mounting direction (standard) (Note 2)	CT3	67
Standard cable track mounting direction (opposite) (Note 2)	CT4	67
Extended cable track mounting direction (side-mount, standard) (Note 2)	ET5	67
Extended cable track mounting direction (side-mount, opposite) (Note 2)	ET6	67
Extended cable track mounting direction (ceiling-mount, standard) (Note 2)	ET7	67
Extended cable track mounting direction (ceiling-mount, opposite) (Note 2)	ET8	67
No cable track (standard) (Note 2)	NT3	68
No cable track (opposite) (Note 2)	NT4	68
User cable track mounting direction (standard) (Note 2)	UM3	68
User cable track mounting direction (opposite) (Note 2)	UM4	68

(Note 1) Be sure to fill in the Model Specification Items option column.
 (Note 2) Be sure to fill in one of the codes in the Model Specification Items option column.

Type	Cable Code	T2	T4
Standard	S (3m)	<input type="radio"/>	<input type="radio"/>
	M (5m)	<input type="radio"/>	<input type="radio"/>
Specified length	X06 (6m) ~ X10 (10m)	<input type="radio"/>	<input type="radio"/>
	X11 (11m) ~ X15 (15m)	<input type="radio"/>	<input type="radio"/>
	X16 (16m) ~ X20 (20m)	<input type="radio"/>	<input type="radio"/>
	X21 (21m) ~ X25 (25m)	<input type="radio"/>	<input type="radio"/>
	X26 (26m) ~ X30 (30m)	<input type="radio"/>	<input type="radio"/>

POINT
Selection Notes

- (1) The payload in the "Main Specifications" indicates the maximum value. Please refer to the "Table of Payload by Speed/Acceleration" for more details.
- (2) The center mass location of the mounted object should be less than half the overhang distance. Even when the overhang distance or load moment is within the allowable value, if abnormal vibration or noise is generated during operation, use less stringent operating conditions.
- (3) The guideline for the overhang load length is 900mm or less in the Ma, Mb and Mc directions. Please refer to P.69 for more information regarding the overhang load length.
- (4) Estimated allowable duty varies depending on the load factor. Please refer to P.69 for more information.
- (5) Refer to P.6 for applicable mounting method.

Main Specifications

Item		Description	
Lead	Ball screw lead (mm)	40	20
	Max. payload (kg)	40	80
Horizontal	Speed/acceleration/ deceleration	Max. speed (mm/s)	2400
		Rated acceleration/deceleration (G)	0.3
		Max. acceleration/deceleration (G)	0.8
Thrust force	Rated thrust force (N)	169.6	339.1
	Min. stroke (mm)	2300	2300
Stroke	Max. stroke (mm)	2700	2700
	Stroke pitch (mm)	50	50

Item	Description
Drive system	Ball screw φ20mm rolled C5 or equivalent
Positioning repeatability	±0.01mm
Lost motion	Less than 0.02mm
Base	Material: Aluminum with white alumite treatment
Linear guide	Direct-acting infinite circulation type
	Ma: 774N-m
	Mb: 1,106N-m
Allowable static moment	Mc: 1,566N-m
	Ma: 162N-m
Allowable dynamic moment (Note 3)	Mb: 231N-m
	Mc: 327N-m
Ambient operating temp. & humidity	0 to 40°C, max. 85% RH or less (Non-condensing)
Degree of protection	-
Vibration resistance/shock resistance	4.9m/s ²
Compliant international standards	CE marking, RoHS Directive
Motor type	AC servo motor (200V)
Encoder type	Battery-less Absolute (17-bit)
Encoder pulse count	131072 pulse/rev

(Note 3) Assumes a standard rated life of 10,000km. The running life will vary depending on operation and installation conditions. Refer to P.1-180 of the General Catalog 2020 for operational life.

Slider Type Moment Direction

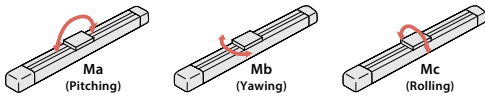


Table of Payload by Speed/Acceleration

The payload is in units of kg.

Lead (mm)	Max speed (mm/s)	Acceleration (G)						
		0.3	0.4	0.5	0.6	0.7	0.8	0.9
40	2400	40	30	20	15	10	7	-
20	1300	80	60	40	30	20	15	7

Stroke and Max Speed

Stroke	2300~2700 (50mm increments)
Lead	
40	2400
20	1300

(Unit: mm/s)

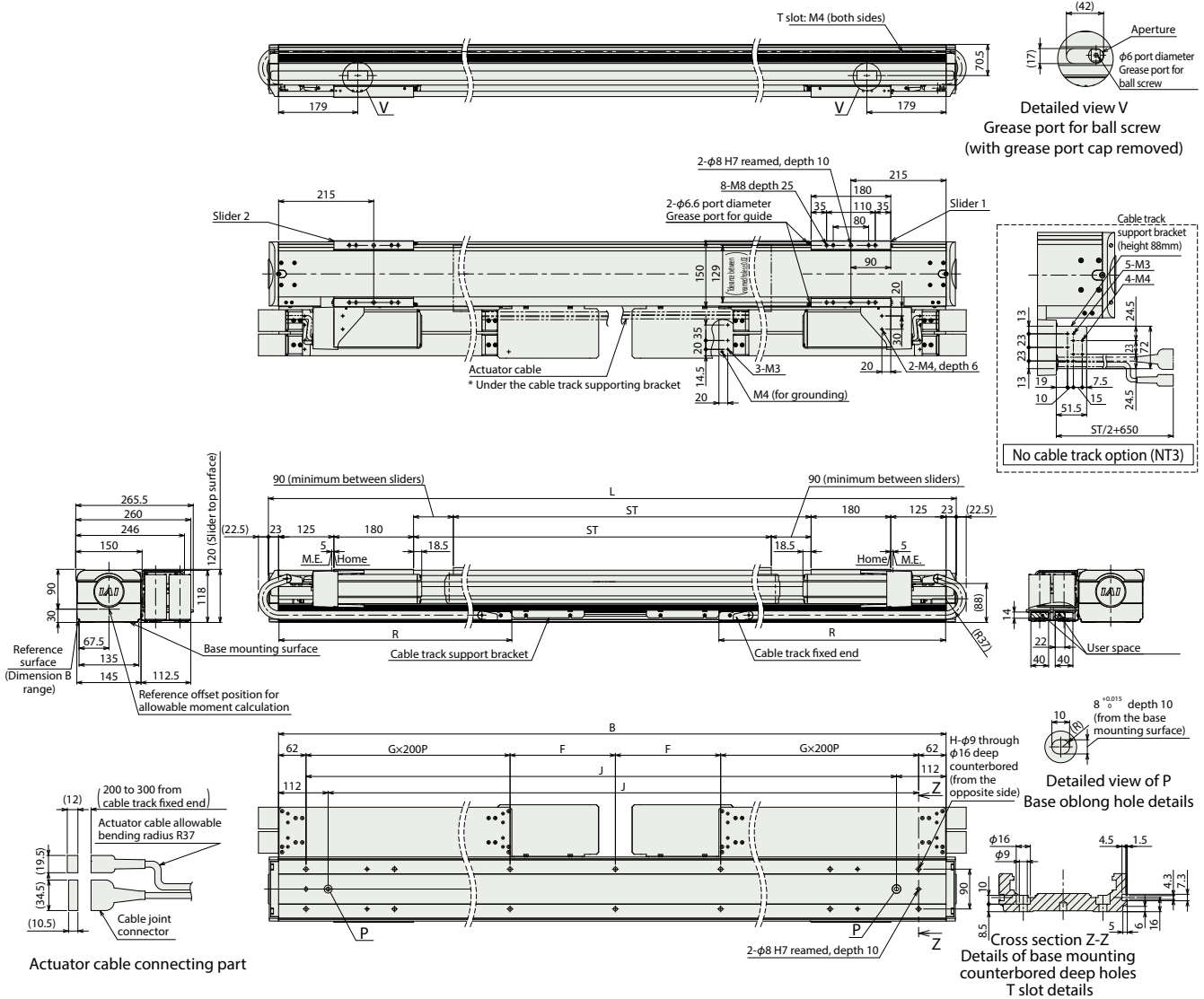
■ NSA-LXMXM_User cable track mounting direction (Standard/UM3)

(Note) Connect the motor cable and encoder cable to the cable joint connector.

Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E

ST: Stroke
M.E: Mechanical end



■ Dimensions by Stroke

Stroke	2300	2350	2400	2450	2500	2550	2600	2650	2700
L	3046	3096	3146	3196	3246	3296	3346	3396	3446
B	3000	3050	3100	3150	3200	3250	3300	3350	3400
F	238	263	288	313	138	163	188	213	238
G	6	6	6	6	7	7	7	7	7
H	30	30	30	30	34	34	34	34	34
J	2826	2876	2926	2976	3026	3076	3126	3176	3226
R	1265	1283	1319	1337	1355	1391	1409	1445	1463

■ Mass by Stroke

Stroke		2300	2350	2400	2450	2500	2550	2600	2650	2700
Mass (kg)	With user cable track	68.8	69.6	70.5	71.3	72.0	73.0	73.8	74.7	75.5
	No cable track	61.9	62.7	63.4	64.1	64.8	65.6	66.3	67.1	67.8

NSA-LXMXM_ Extended cable track mounting direction (side-mount, standard/ET5)

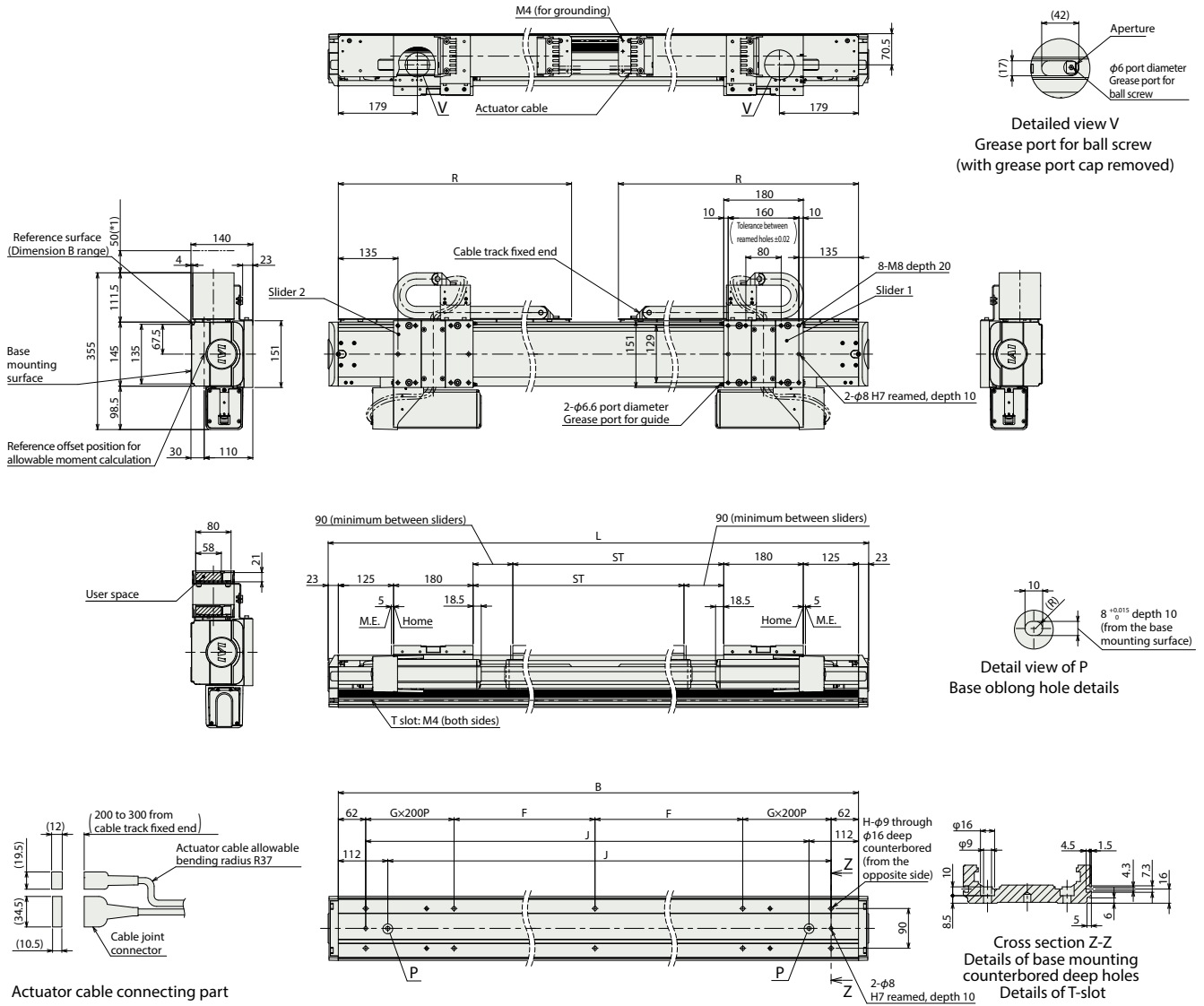
*1 Keep an appropriate space around the cable track as it may swell.

(Note) Connect the motor cable and encoder cable to the cable joint connector.

Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E

ST: Stroke
M.E: Mechanical end



Actuator cable connecting part

Dimensions by Stroke

Stroke	2300	2350	2400	2450	2500	2550	2600	2650	2700
L	3046	3096	3146	3196	3246	3296	3346	3396	3446
B	3000	3050	3100	3150	3200	3250	3300	3350	3400
F	238	263	288	313	138	163	188	213	238
G	6	6	6	6	7	7	7	7	7
H	30	30	30	30	34	34	34	34	34
J	2826	2876	2926	2976	3026	3076	3126	3176	3226
R	1447	1472	1496	1522	1547	1572	1596	1622	1646

Mass by Stroke

Stroke	2300	2350	2400	2450	2500	2550	2600	2650	2700
Mass (kg)	69.3	70.1	70.9	71.7	72.4	73.3	74.1	74.9	75.8

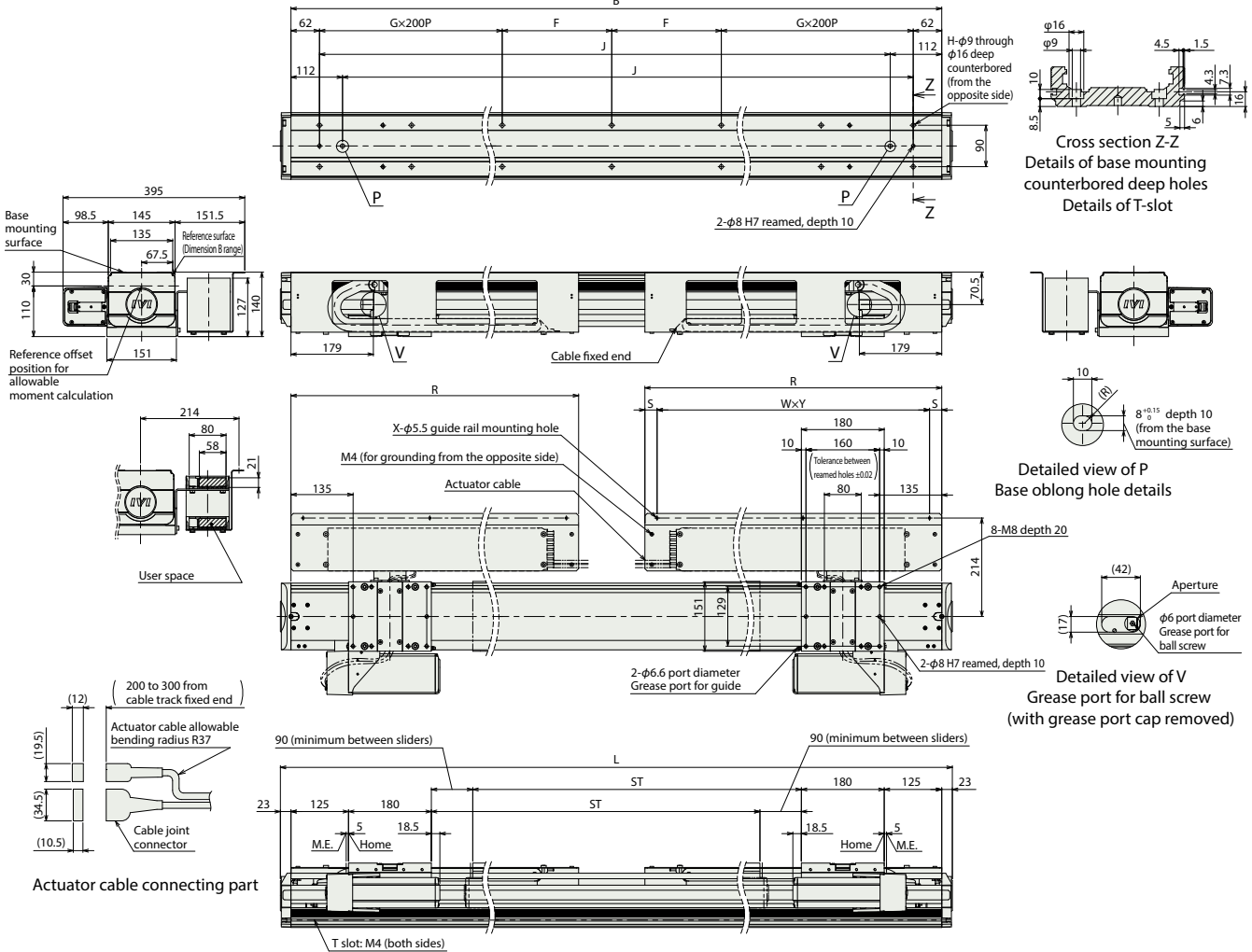
■ NSA-LXMXM_Extended cable track mounting direction (ceiling-mount, standard/ET7)

(Note) Connect the motor cable and encoder cable to the cable joint connector.

Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E

ST: Stroke
M.E: Mechanical end



■ Dimensions by Stroke

Stroke	2300	2350	2400	2450	2500	2550	2600	2650	2700
L	3046	3096	3146	3196	3246	3296	3346	3396	3446
B	3000	3050	3100	3150	3200	3250	3300	3350	3400
F	238	263	288	313	138	163	188	213	238
G	6	6	6	6	7	7	7	7	7
H	30	30	30	30	34	34	34	34	34
J	2826	2876	2926	2976	3026	3076	3126	3176	3226
R	1428	1453	1477	1503	1528	1553	1577	1603	1628
S	26.5	26.5	26	26.5	26.5	26.5	26	26.5	26.5
W	5	5	5	5	5	5	5	5	5
X	6	6	6	6	6	6	6	6	6
Y	275	280	285	290	295	300	305	310	315

■ Mass by Stroke

Stroke	2300	2350	2400	2450	2500	2550	2600	2650	2700
Mass (kg)	72.4	73.3	74.2	75.1	75.9	76.9	77.7	78.6	79.2

■ Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Power supply voltage	Control method													Maximum number of positioning points	Reference page	
				Positioner	Pulse-train	Program	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT			SSN
RCON		16	DC24V Single phase 200VAC	-	-	-	●	●	●	●	-	-	-	●	●	-	-	128	Please contact IAI America for more information
RSEL		8	Single phase 200VAC	-	-	●	●	●	●	-	-	-	●	●	●	-	-	36000	
SCON-CB/CGB		1	Single phase 200VAC	●	●	-	●	●	●	●	●	●	●	●	●	-	-	512 (768 for network spec.)	
SSEL-CS		2	Single phase 100VAC/ 200VAC	●	-	●	●	-	●	-	-	-	-	●	-	-	-	20000	
XSEL-P/Q		6	Single phase 200VAC	-	-	●	●	-	●	-	-	-	-	●	-	-	-	20000	
XSEL-RA/SA		8	Three-phase 200VAC	-	-	●	●	-	●	-	-	-	-	●	●	-	-	55000 (Depending on the type)	

(Note) For network abbreviations such as DV and CC, refer to P.7-17 of the General Catalog 2020.
(Note) The multi-slider is controlled by either a 2-axis controller or two SCONs.

NSA-WXMS

±10μm
Standard

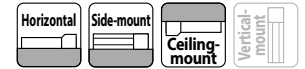
Battery-less
Absolute

Body Width
200
mm

750
W

Model Specification Items

NSA	WXMS	WA	750						AQ
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options	
		WA Battery-less Absolute	750 750W	50 50mm 25 25mm	650 650mm 2300 2300mm (50mm increments)	T2 SCON SSEL XSEL-P/Q XSEL-RA/SA T4 RCON RSEL	N None S 3m M 5m X□□ Specified length	Refer to Options table below.	



Stroke			
Stroke (mm)	NSA-WXMS	Stroke (mm)	NSA-WXMS
650	○	1500	○
700	○	1550	○
750	○	1600	○
800	○	1650	○
850	○	1700	○
900	○	1750	○
950	○	1800	○
1000	○	1850	○
1050	○	1900	○
1100	○	1950	○
1150	○	2000	○
1200	○	2050	○
1250	○	2100	○
1300	○	2150	○
1350	○	2200	○
1400	○	2250	○
1450	○	2300	○

POINT
Selection
Notes

- (1) The payload in the "Main Specifications" indicates the maximum value. Please refer to the "Table of Payload by Speed/Acceleration" for more details.
- (2) The center mass location of the mounted object should be less than half the overhang distance. Even when the overhang distance or load moment is within the allowable value, if abnormal vibration or noise is generated during operation, use less stringent operating conditions.
- (3) The guideline for the overhang load length is 900mm or less in the Ma, Mb and Mc directions. Please refer to P.69 for more information regarding the overhang load length.
- (4) Estimated allowable duty varies depending on the load factor. Please refer to P. 69 for more information.
- (5) Refer to P.6 for applicable mounting method.

Options * Please check the Options reference pages to confirm each option.

Name	Model	Reference Page
AQ seal (equipped as standard) (Note 1)	AQ	67
Standard cable track mounting direction (standard) (Note 2)	CT3	67
Standard cable track mounting direction (opposite) (Note 2)	CT4	67
Extended cable track mounting direction (side-mount standard) (Note 2)	ET5	68
Extended cable track mounting direction (side-mount, opposite) (Note 2)	ET6	68
Extended cable track mounting direction (ceiling-mount standard) (Note 2)	ET7	68
Extended cable track mounting direction (ceiling-mount, opposite) (Note 2)	ET8	68
Non-motor end specification	NM	68
No cable track (standard) (Note 2)	NT3	68
No cable track (opposite) (Note 2)	NT4	68
User cable track mounting direction (standard) (Note 2)	UM3	68
User cable track mounting direction (opposite) (Note 2)	UM4	68

(Note 1) Be sure to fill in the Model Specification Items option column.
 (Note 2) Be sure to fill in one of the codes in the Model Specification Items option column.

Cable Length			
Type	Cable Code	T2	T4
Standard	S (3m)	○	○
	M (5m)	○	○
Specified length	X06 (6m) ~ X10 (10m)	○	○
	X11 (11m) ~ X15 (15m)	○	○
	X16 (16m) ~ X20 (20m)	○	○
	X21 (21m) ~ X25 (25m)	○	○
	X26 (26m) ~ X30 (30m)	○	○

(Note) This is a robot cable.

Main Specifications

Item		Description	
Lead	Ball screw lead (mm)	50	25
	Max. payload (kg)	60	120
Horizontal	Speed/acceleration/ deceleration	Max speed (mm/s)	2500
		Rated acceleration/deceleration (G)	0.3
		Max. acceleration/deceleration (G)	0.9
Thrust force	Rated thrust force (N)	255.3	510.6
	Min. stroke (mm)	650	650
Stroke	Max. stroke (mm)	2300	2300
	Stroke pitch (mm)	50	50

Item	Description
Drive system	Ball screw ϕ 25mm rolled C5 or equivalent
Positioning repeatability	\pm 0.01mm
Lost motion	0.02mm or less
Base	Material: Aluminum with white alumite treatment
Linear guide	Direct-acting infinite circulation type
Allowable static moment	Ma: 774N-m
	Mb: 1,106N-m
	Mc: 2,175N-m
Allowable dynamic moment (Note 3)	Ma: 162N-m
	Mb: 231N-m
	Mc: 455N-m
Ambient operating temp. & humidity	0 to 40°C, max. 85% RH or less (Non-condensing)
Degree of protection	-
Vibration resistance/shock resistance	4.9m/s ²
Compliant international standards	CE marking, RoHS Directive
Motor type	AC servo motor (200V)
Encoder type	Battery-less Absolute (17-bit)
Encoder pulse count	131072 pulse/rev

(Note 3) Assumes a standard rated life of 10,000km. The running life will vary depending on operation and installation conditions. Refer to P.1-180 of the General Catalog 2020 for operational life.

Slider Type Moment Direction

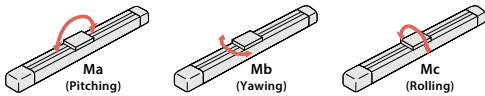


Table of Payload by Speed/Acceleration

The payload is in units of kg.

Lead (mm)	Max speed (mm/s)	Acceleration (G)							
		0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
50	2500	60	45	35	29	22	17	12	-
25	1300	120	90	70	52	40	29	20	11

Stroke and Max Speed

Lead	Stroke (50mm increments)
	650~2300
50	2500
25	1300

(Unit: mm/s)

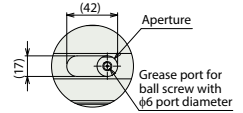
■ NSA-WXMS_Standard Cable Track Mounting Direction (standard/CT3)

(Note) Connect the motor cable and encoder cable to the cable joint connector.

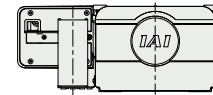
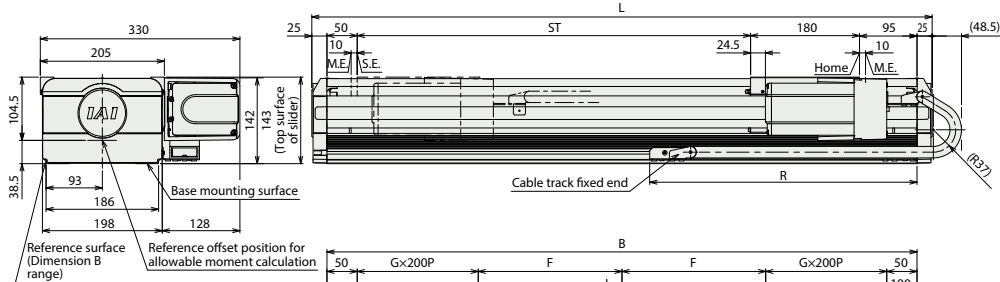
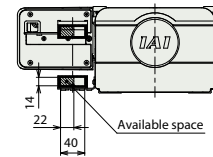
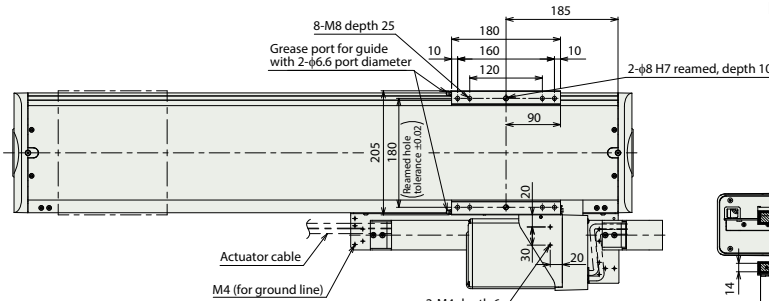
Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.

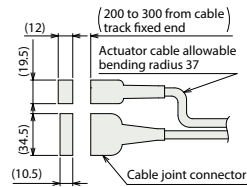
ST: Stroke
M.E: Mechanical end
S.E: Stroke end



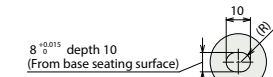
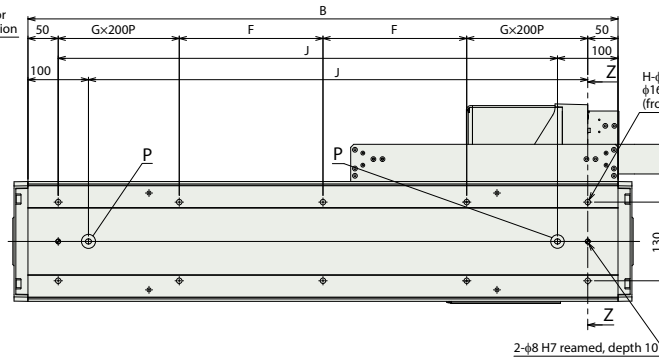
Detailed view of V
Ball screw grease lubrication port
(with grease port cap removed)



Reference surface (Dimension B range)
Reference offset position for allowable moment calculation

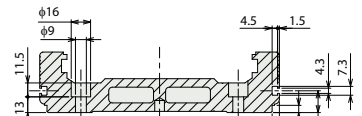


Actuator cable connecting part



Detailed view of P
Base oblong hole details

H-φ9 through φ16 deep counterbored (from the opposite side)



Cross section Z-Z
Details of base mounting counterbored deep holes
Details of T-slot

■ Dimensions by Stroke

Stroke	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	
L	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	1875	1925	1975	2025	2075	2125	2175	2225	2275	2325	2375	2425	2475	2525	2575	2625	2675	
B	975	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	1875	1925	1975	2025	2075	2125	2175	2225	2275	2325	2375	2425	2475	2525	2575	2625	
F	237.5	262.5	287.5	312.5	337.5	362.5	387.5	412.5	437.5	462.5	487.5	512.5	537.5	562.5	587.5	612.5	637.5	662.5	687.5	712.5	737.5	762.5	787.5	812.5	837.5	862.5	887.5	912.5	937.5	962.5	987.5	1012.5	1037.5	1062.5	1087.5
G	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5	5	5	
H	10	10	10	10	14	14	14	14	14	14	14	14	18	18	18	18	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26	26	26	26	
J	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	1875	1925	1975	2025	2075	2125	2175	2225	2275	2325	2375	2425	2475	
R	442	460	478	514	532	568	586	604	640	658	694	712	730	766	784	802	838	856	892	910	928	964	982	1018	1036	1054	1090	1108	1144	1162	1180	1216	1234	1252	

■ Mass by Stroke

Stroke	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300
Mass (kg)	37.6	38.8	39.9	41.1	42.1	43.3	44.4	45.6	46.7	47.8	49.0	50.1	51.2	52.4	53.5	54.6	55.8	56.9	58.0	59.2	60.3	61.4	62.5	63.7	64.8	66.0	67.1	68.2	69.4	70.5	71.6	72.8	73.9	75.0

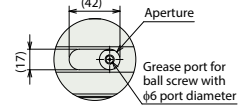
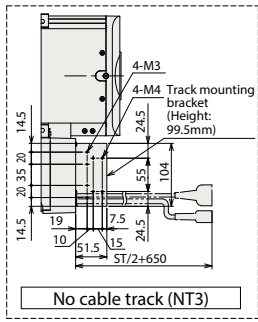
NSA-WXMS_User Cable Track Mounting Direction (standard/UM3)

(Note) Connect the motor cable and encoder cable to the cable joint connector.

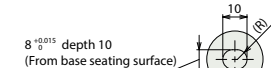
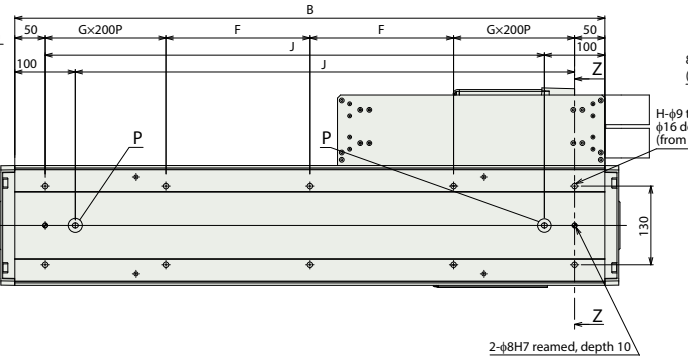
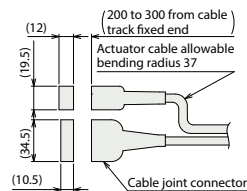
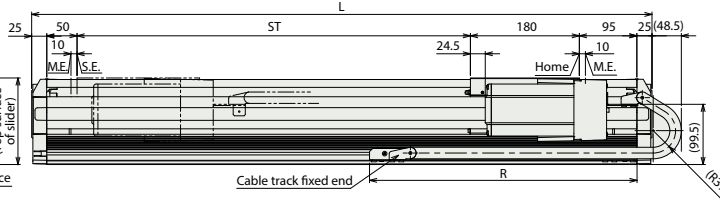
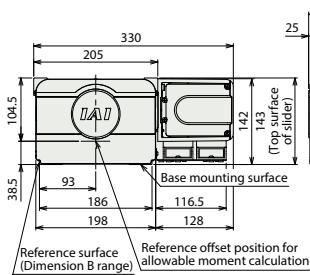
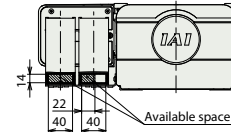
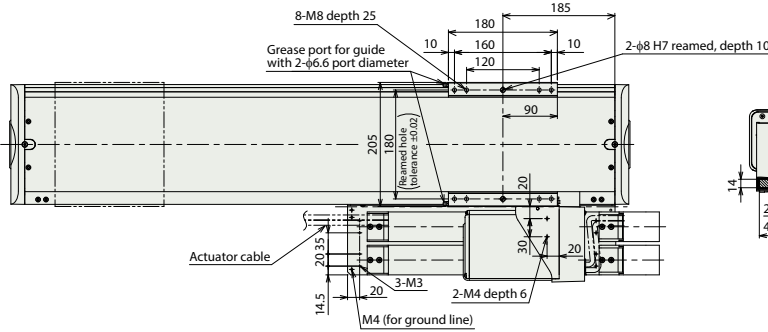
Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.

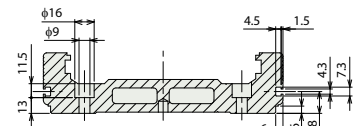
ST: Stroke
M.E: Mechanical end
S.E: Stroke end



Detailed view of V
Ball screw grease lubrication port
(with grease port cap removed)



Detailed view of P
Base oblong hole
details



Cross section Z-Z
Details of base mounting
counterbored deep holes
Details of T-slot

Actuator cable connecting part

Dimensions by Stroke

Stroke	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	
L	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	1875	1925	1975	2025	2075	2125	2175	2225	2275	2325	2375	2425	2475	2525	2575	2625	2675	
B	975	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	1875	1925	1975	2025	2075	2125	2175	2225	2275	2325	2375	2425	2475	2525	2575	2625	
F	237.5	262.5	287.5	312.5	337.5	362.5	387.5	412.5	437.5	462.5	487.5	512.5	537.5	562.5	587.5	612.5	637.5	662.5	687.5	712.5	737.5	762.5	787.5	812.5	837.5	862.5	887.5	912.5	937.5	962.5	987.5	1012.5	1037.5	1062.5	1087.5
G	1	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5	5	5	
H	10	10	10	10	14	14	14	14	14	14	14	18	18	18	18	18	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26	26	26	26	26
J	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	1875	1925	1975	2025	2075	2125	2175	2225	2275	2325	2375	2425	2475	
R	442	460	478	514	532	568	586	604	640	658	694	712	730	766	784	802	838	856	892	910	928	964	982	1018	1036	1054	1090	1108	1144	1162	1180	1216	1234	1252	

Mass by Stroke

Stroke	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300
Mass (kg)	38.1	39.3	40.4	41.6	42.7	43.9	45.0	46.2	47.4	48.5	49.7	50.8	52.0	53.1	54.3	55.4	56.6	57.8	58.9	60.1	61.2	62.4	63.5	64.7	65.9	67.0	68.2	69.3	70.5	71.6	72.8	74.0	75.1	76.3
With user cable track	36.9	38.0	39.1	40.2	41.3	42.4	43.5	44.6	45.7	46.8	47.9	49.0	50.1	51.2	52.3	53.4	54.5	55.6	56.7	57.8	58.9	60.0	61.1	62.2	63.3	64.4	65.5	66.6	67.7	68.8	69.9	71.0	72.1	73.2

NSA-WXMS_Extended cable track mounting direction (side-mount, standard/ET5)

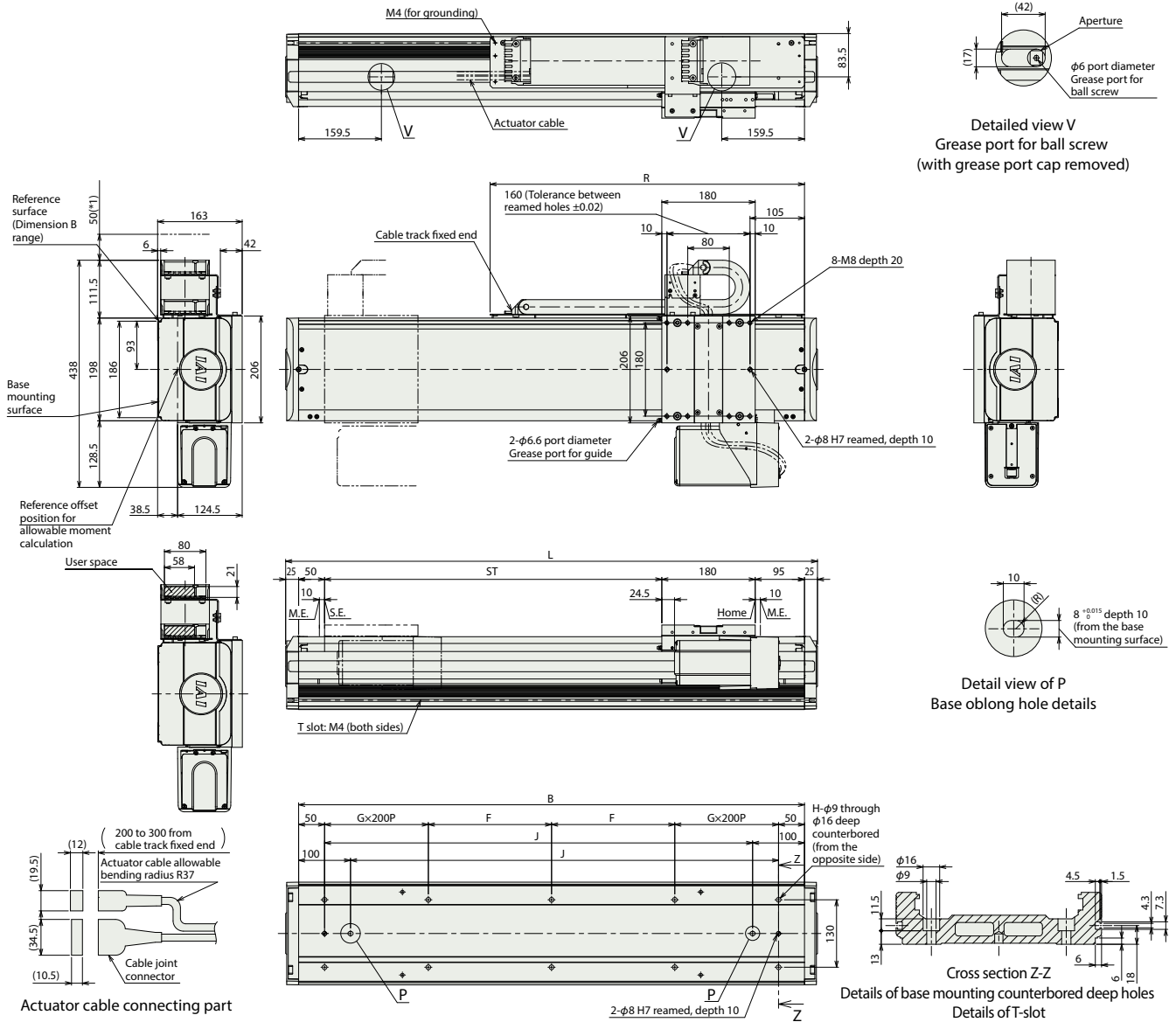
*1 Keep an appropriate space around the cable track as it may swell.

(Note) Connect the motor cable and encoder cable to the cable joint connector.

Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E

ST: Stroke
M.E: Mechanical end
S.E: Stroke end



Dimensions by Stroke

Stroke	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	
L	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	1875	1925	1975	2025	2075	2125	2175	2225	2275	2325	2375	2425	2475	2525	2575	2625	2675	
B	975	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	1875	1925	1975	2025	2075	2125	2175	2225	2275	2325	2375	2425	2475	2525	2575	2625	
F	2375	2625	2875	3125	3375	3625	3875	4125	4375	4625	4875	5125	5375	5625	5875	6125	6375	6625	6875	7125	7375	7625	7875	8125	8375	8625	8875	9125	9375	9625	9875	10125	10375	10625	10875
G	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
H	10	10	10	10	14	14	14	14	14	14	14	14	14	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
J	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	1875	1925	1975	2025	2075	2125	2175	2225	2275	2325	2375	2425	2475	
R	606	632	657	682	707	731	758	782	806	833	857	881	905	932	956	983	1006	1032	1056	1082	1106	1132	1156	1182	1206	1230	1256	1282	1306	1331	1357	1382	1406	1431	

Mass by Stroke

Stroke	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300
Mass (kg)	38.9	40.0	41.1	42.2	43.3	44.4	45.5	46.6	47.7	48.8	49.9	51.0	52.0	53.1	54.2	55.4	56.5	57.6	58.7	59.8	60.8	61.9	63.0	64.1	65.2	66.3	67.5	68.6	69.6	70.7	71.8	72.9	74.0	75.1

NSA-WXMM

±10μm
Battery-less Absolute
Multi Slider
Body Width 200mm
750W

Model Specification Items

NSA - **WXMM** - **WA** - **750** - - - - - **AQ** -

Series - Type - Encoder Type - Motor Type - Lead - Stroke - Applicable Controllers - Cable Length - Options

WA	Battery-less Absolute	750	750W	50 50mm 25 25mm	300 300mm 2300 2300mm (50mm increments)	T2 SCON SSEL XSEL-P/Q XSEL-RA/SA T4 RCON RSEL	N None M 3m S 5m X□□ Specified length	Options Refer to Options table below.
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Stroke

Stroke (mm)	NSA-WXMM	Stroke (mm)	NSA-WXMM
300	<input type="checkbox"/>	1350	<input type="checkbox"/>
350	<input type="checkbox"/>	1400	<input type="checkbox"/>
400	<input type="checkbox"/>	1450	<input type="checkbox"/>
450	<input type="checkbox"/>	1500	<input type="checkbox"/>
500	<input type="checkbox"/>	1550	<input type="checkbox"/>
550	<input type="checkbox"/>	1600	<input type="checkbox"/>
600	<input type="checkbox"/>	1650	<input type="checkbox"/>
650	<input type="checkbox"/>	1700	<input type="checkbox"/>
700	<input type="checkbox"/>	1750	<input type="checkbox"/>
750	<input type="checkbox"/>	1800	<input type="checkbox"/>
800	<input type="checkbox"/>	1850	<input type="checkbox"/>
850	<input type="checkbox"/>	1900	<input type="checkbox"/>
900	<input type="checkbox"/>	1950	<input type="checkbox"/>
950	<input type="checkbox"/>	2000	<input type="checkbox"/>
1000	<input type="checkbox"/>	2050	<input type="checkbox"/>
1050	<input type="checkbox"/>	2100	<input type="checkbox"/>
1100	<input type="checkbox"/>	2150	<input type="checkbox"/>
1150	<input type="checkbox"/>	2200	<input type="checkbox"/>
1200	<input type="checkbox"/>	2250	<input type="checkbox"/>
1250	<input type="checkbox"/>	2300	<input type="checkbox"/>
1300	<input type="checkbox"/>		

Cable Length

Type	Cable Code	T2	T4
Standard	S(3m)	<input type="checkbox"/>	<input type="checkbox"/>
	M(5m)	<input type="checkbox"/>	<input type="checkbox"/>
Specified length	X06(6m) ~ X10(10m)	<input type="checkbox"/>	<input type="checkbox"/>
	X11(11m) ~ X15(15m)	<input type="checkbox"/>	<input type="checkbox"/>
	X16(16m) ~ X20(20m)	<input type="checkbox"/>	<input type="checkbox"/>
	X21(21m) ~ X25(25m)	<input type="checkbox"/>	<input type="checkbox"/>
	X26(26m) ~ X30(30m)	<input type="checkbox"/>	<input type="checkbox"/>

(Note) This is a robot cable.

POINT Selection Notes

- The payload in the "Main Specifications" indicates the maximum value. Please refer to the "Table of Payload by Speed/Acceleration" for more details.
- The center mass location of the mounted object should be less than half the overhang distance. Even when the overhang distance or load moment is within the allowable value, if abnormal vibration or noise is generated during operation, use less stringent operating conditions.
- The guideline for the overhang load length is 900mm or less in the Ma, Mb and Mc directions. Please refer to P. 69 for more information regarding the overhang load length.
- Estimated allowable duty varies depending on the load factor. Please refer to P. 69 for more information.
- Refer to P. 6 for applicable mounting method.

Options * Please check the Options reference pages to confirm each option.

Name	Model	Reference Page
AQ seal (equipped as standard) (Note 1)	AQ	67
Standard cable track mounting direction (standard) (Note 2)	CT3	67
Standard cable track mounting direction (opposite) (Note 2)	CT4	67
Extended cable track mounting direction (side-mount, standard) (Note 2)	ET5	68
Extended cable track mounting direction (side-mount, opposite) (Note 2)	ET6	68
Extended cable track mounting direction (ceiling-mount, standard) (Note 2)	ET7	68
Extended cable track mounting direction (ceiling-mount, opposite) (Note 2)	ET8	68
No cable track (standard) (Note 2)	NT3	68
No cable track (opposite) (Note 2)	NT4	68
User cable track mounting direction (standard) (Note 2)	UM3	68
User cable track mounting direction (opposite) (Note 2)	UM4	68

(Note 1) Be sure to fill in the Model Specification Items option column.
 (Note 2) Be sure to fill in one of the codes in the Model Specification Items option column.

Main Specifications

Item		Description	
Lead	Ball screw lead (mm)	50	25
	Max. payload (kg)	60	120
Horizontal	Speed/acceleration/ deceleration	Max speed (mm/s)	2500
		Rated acceleration/deceleration (G)	0.3
		Max. acceleration/deceleration (G)	0.9
Thrust force	Rated thrust force (N)	255.3	510.6
	Min. stroke (mm)	300	300
Stroke	Max. stroke (mm)	2300	2300
	Stroke pitch (mm)	50	50

Item	Description
Drive system	Ball screw ϕ 25mm rolled C5 or equivalent
Positioning repeatability	\pm 0.01mm
Lost motion	0.02mm or less
Base	Material: Aluminum with white alumite treatment
Linear guide	Direct-acting infinite circulation type
Allowable static moment	Ma: 774N-m
	Mb: 1,106N-m
	Mc: 2,175N-m
Allowable dynamic moment (Note 3)	Ma: 162N-m
	Mb: 231N-m
	Mc: 455N-m
Ambient operating temp. & humidity	0 to 40°C, max. 85% RH or less (Non-condensing)
Degree of protection	-
Vibration resistance/shock resistance	4.9m/s ²
Compliant international standards	CE marking, RoHS Directive
Motor type	AC servo motor (200V)
Encoder type	Battery-less Absolute
Encoder pulse count	131072 pulse/rev

(Note 3) Assumes a standard rated life of 10,000km. The running life will vary depending on operation and installation conditions. Refer to P.1-180 of the General Catalog 2020 for operational life.

Slider Type Moment Direction

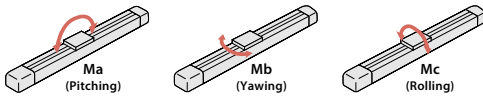


Table of Payload by Speed/Acceleration

The payload is in units of kg.

Lead (mm)	Max speed (mm/s)	Acceleration (G)							
		0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
50	2500	60	45	35	29	22	17	12	-
25	1300	120	90	70	52	40	29	20	11

Stroke and Max Speed

Stroke	300~2300 (50mm increments)
Lead	
50	2500
25	1300

(Unit: mm/s)

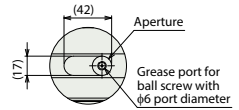
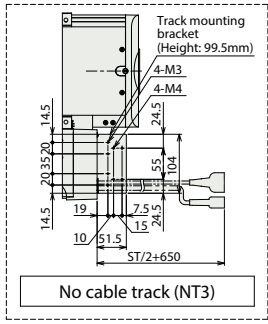
NSA-WXMM_User Cable Track Mounting Direction (standard/UM3)

(Note) Connect the motor cable and encoder cable to the cable joint connector.

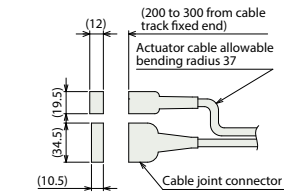
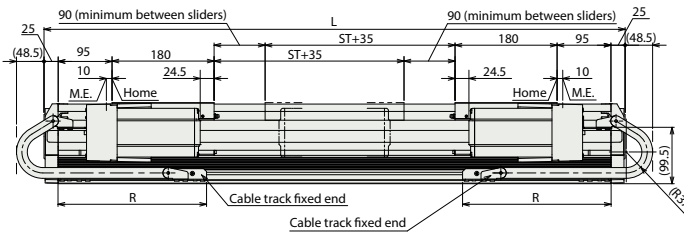
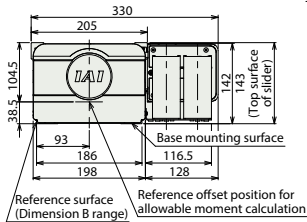
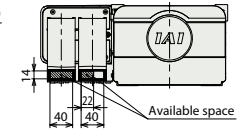
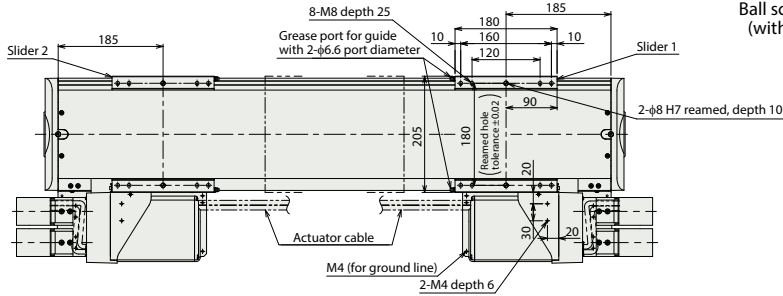
Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.

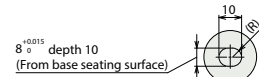
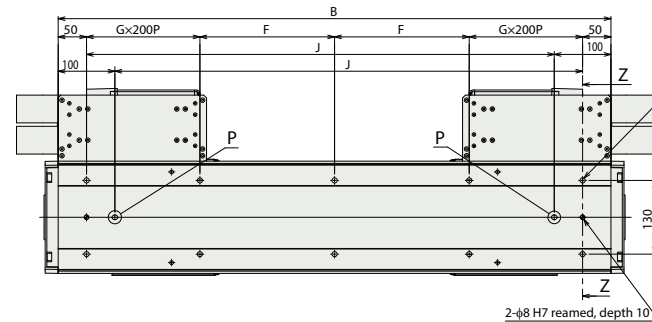
ST: Stroke
M.E: Mechanical end



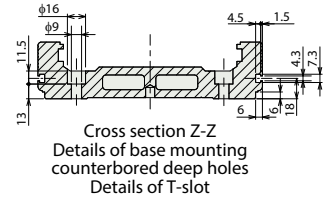
Detailed view of V Ball screw grease lubrication port (with grease port cap removed)



Actuator cable connecting part



Detailed view of P Base oblong hole details



Cross section Z-Z Details of base mounting counterbored deep holes Details of T-slot

Dimensions by Stroke

Stroke	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300					
L	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	1875	1925	1975	2025	2075	2125	2175	2225	2275	2325	2375	2425	2475	2525	2575	2625	2675	2725	2775	2825	2875	2925	2975	3025					
B	975	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	1875	1925	1975	2025	2075	2125	2175	2225	2275	2325	2375	2425	2475	2525	2575	2625	2675	2725	2775	2825	2875	2925	2975					
F	237.5	262.5	287.5	312.5	337.5	362.5	387.5	412.5	437.5	462.5	487.5	512.5	537.5	562.5	587.5	612.5	637.5	662.5	687.5	712.5	737.5	762.5	787.5	812.5	837.5	862.5	887.5	912.5	937.5	962.5	987.5	1012.5	1037.5	1062.5	1087.5	1112.5	1137.5	1162.5	1187.5	1212.5	1237.5					
G	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
H	10	10	10	10	14	14	14	14	14	14	14	14	18	18	18	18	18	18	18	18	18	22	22	22	22	22	22	22	26	26	26	26	26	26	26	26	26	26	30	30	30	30	30	30	30	30
J	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	1875	1925	1975	2025	2075	2125	2175	2225	2275	2325	2375	2425	2475	2525	2575	2625	2675	2725	2775	2825	2875	2925	2975		
R	262	280	316	334	352	388	406	442	460	478	514	532	568	586	604	640	658	694	712	730	766	784	802	838	856	892	910	928	964	982	1018	1036	1054	1090	1108	1144	1162	1180	1216	1234	1252	1270	1288	1324	1342	

Mass by Stroke

Mass (kg)	Stroke																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
With user cable track	50.8	52.0	53.3	54.5	55.6	56.9	58.1	59.4	60.5	61.7	63.0	64.2	65.4	66.6	67.8	69.1	70.2	71.5	72.7	73.9	75.1	76.3	77.5	78.8	80.0	81.2	82.4	83.6	84.8	86.0	87.3	88.5	89.7	90.9	92.1	93.4	94.5	95.7	97.0	98.2	99.4	100.6	101.8	103.0	104.2	105.4	106.6	107.8	109.0	110.2	111.4	112.6	113.8	115.0	116.2	117.4	118.6	119.8	121.0	122.2	123.4	124.6	125.8	127.0	128.2	129.4	130.6	131.8	133.0	134.2	135.4	136.6	137.8	139.0	140.2	141.4	142.6	143.8	145.0	146.2	147.4	148.6	149.8	151.0	152.2	153.4	154.6	155.8	157.0	158.2	159.4	160.6	161.8	163.0	164.2	165.4	166.6	167.8	169.0	170.2	171.4	172.6	173.8	175.0	176.2	177.4	178.6	179.8	181.0	182.2	183.4	184.6	185.8	187.0	188.2	189.4	190.6	191.8	193.0	194.2	195.4	196.6	197.8	199.0	200.2	201.4	202.6	203.8	205.0	206.2	207.4	208.6	209.8	211.0	212.2	213.4	214.6	215.8	217.0	218.2	219.4	220.6	221.8	223.0	224.2	225.4	226.6	227.8	229.0	230.2	231.4	232.6	233.8	235.0	236.2	237.4	238.6	239.8	241.0	242.2	243.4	244.6	245.8	247.0	248.2	249.4	250.6	251.8	253.0	254.2	255.4	256.6	257.8	259.0	260.2	261.4	262.6	263.8	265.0	266.2	267.4	268.6	269.8	271.0	272.2	273.4	274.6	275.8	277.0	278.2	279.4	280.6	281.8	283.0	284.2	285.4	286.6	287.8	289.0	290.2	291.4	292.6	293.8	295.0	296.2	297.4	298.6	299.8	301.0	302.2	303.4	304.6	305.8	307.0	308.2	309.4	310.6	311.8	313.0	314.2	315.4	316.6	317.8	319.0	320.2	321.4	322.6	323.8	325.0	326.2	327.4	328.6	329.8	331.0	332.2	333.4	334.6	335.8	337.0	338.2	339.4	340.6	341.8	343.0	344.2	345.4	346.6	347.8	349.0	350.2	351.4	352.6	353.8	355.0	356.2	357.4	358.6	359.8	361.0	362.2	363.4	364.6	365.8	367.0	368.2	369.4	370.6	371.8	373.0	374.2	375.4	376.6	377.8	379.0	380.2	381.4	382.6	383.8	385.0	386.2	387.4	388.6	389.8	391.0	392.2	393.4	394.6	395.8	397.0	398.2	399.4	400.6	401.8	403.0	404.2	405.4	406.6	407.8	409.0	410.2	411.4	412.6	413.8	415.0	416.2	417.4	418.6	419.8	421.0	422.2	423.4	424.6	425.8	427.0	428.2	429.4	430.6	431.8	433.0	434.2	435.4	436.6	437.8	439.0	440.2	441.4	442.6	443.8	445.0	446.2	447.4	448.6	449.8	451.0	452.2	453.4	454.6	455.8	457.0	458.2	459.4	460.6	461.8	463.0	464.2	465.4	466.6	467.8	469.0	470.2	471.4	472.6	473.8	475.0	476.2	477.4	478.6	479.8	481.0	482.2	483.4	484.6	485.8	487.0	488.2	489.4	490.6	491.8	493.0	494.2	495.4	496.6	497.8	499.0	500.2	501.4	502.6	503.8	505.0	506.2	507.4	508.6	509.8	511.0	512.2	513.4	514.6	515.8	517.0	518.2	519.4	520.6	521.8	523.0	524.2	525.4	526.6	527.8	529.0	530.2	531.4	532.6	533.8	535.0	536.2	537.4	538.6	539.8	541.0	542.2	543.4	544.6	545.8	547.0	548.2	549.4	550.6	551.8	553.0	554.2	555.4	556.6	557.8	559.0	560.2	561.4	562.6	563.8	565.0	566.2	567.4	568.6	569.8	571.0	572.2	573.4	574.6	575.8	577.0	578.2	579.4	580.6	581.8	583.0	584.2	585.4	586.6	587.8	589.0	590.2	591.4	592.6	593.8	595.0	596.2	597.4	598.6	599.8	601.0	602.2	603.4	604.6	605.8	607.0	608.2	609.4	610.6	611.8	613.0	614.2	615.4	616.6	617.8	619.0	620.2	621.4	622.6	623.8	625.0	626.2	627.4	628.6	629.8	631.0	632.2	633.4	634.6	635.8	637.0	638.2	639.4	640.6	641.8	643.0	644.2	645.4	646.6	647.8	649.0	650.2	651.4	652.6	653.8	655.0	656.2	657.4	658.6	659.8	661.0	662.2	663.4	664.6	665.8	667.0	668.2	669.4	670.6	671.8	673.0	674.2	675.4	676.6	677.8	679.0	680.2	681.4	682.6	683.8	685.0	686.2	687.4	688.6	689.8	691.0	692.2	693.4	694.6	695.8	697.0	698.2	699.4	700.6	701.8	703.0	704.2	705.4	706.6	707.8	709.0	710.2	711.4	712.6	713.8	715.0	716.2	717.4	718.6	719.8	721.0	722.2	723.4	724.6	725.8	727.0	728.2	729.4	730.6	731.8	733.0	734.2	735.4	736.6	737.8	739.0	740.2	741.4	742.6	743.8	745.0	746.2	747.4	748.6	749.8	751.0	752.2	753.4	754.6	755.8	757.0	758.2	759.4	760.6	761.8	763.0	764.2	765.4	766.6	767.8	769.0	770.2	771.4	772.6	773.8	775.0	776.2	777.4	778.6	779.8	781.0	782.2	783.4	784.6	785.8	787.0	788.2	789.4	790.6	791.8	793.0	794.2	795.4	796.6	797.8	799.0	800.2	801.4	802.6	803.8	805.0	806.2	807.4	808.6	809.8	811.0	812.2	813.4	814.6	815.8	817.0	818.2	819.4	820.6	821.8	823.0	824.2	825.4	826.6	827.8	829.0	830.2	831.4	832.6	833.8	835.0	836.2	837.4	838.6	839.8	841.0	842.2	843.4	844.6	845.8	847.0	848.2	849.4	850.6	851.8	853.0	854.2	855.4	856.6	857.8	859.0	860.2	861.4	862.6	863.8	865.0	866.2	867.4	868.6	869.8	871.0	872.2	873.4	874.6	875.8	877.0	878.2	879.4	880.6	881.8	883.0	884.2	885.4	886.6	887.8	889.0	890.2	891.4	892.6	893.8	895.0	896.2	897.4	898.6	899.8	901.0	902.2	903.4	904.6	905.8	907.0	908.2	909.4	910.6	911.

NSA-WXMM_Extended cable track mounting direction (side-mount, standard/ET5)

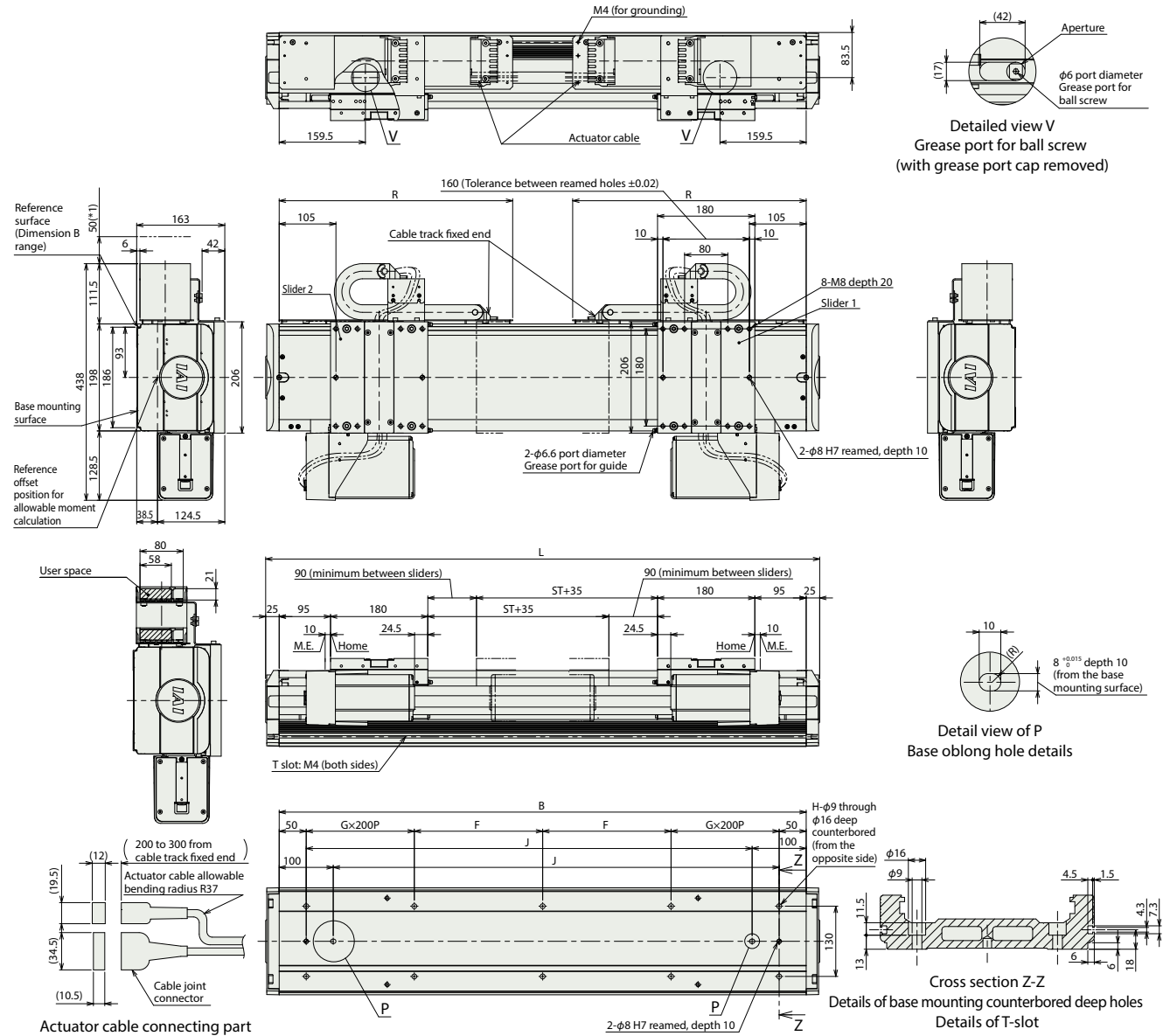
*1 Keep an appropriate space around the cable track as it may swell.

(Note) Connect the motor cable and encoder cable to the cable joint connector.

Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E

ST: Stroke
M.E: Mechanical end



Dimensions by Stroke

Stroke	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300
L	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	1875	1925	1975	2025	2075	2125	2175	2225	2275	2325	2375	2425	2475	2525	2575	2625	2675	2725	2775	2825	2875	2925	3025	
B	975	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	1875	1925	1975	2025	2075	2125	2175	2225	2275	2325	2375	2425	2475	2525	2575	2625	2675	2725	2775	2825	2875	2925	2975
F	2375	2625	2875	3125	3375	3625	3875	4125	4375	4625	4875	5125	5375	5625	5875	6125	6375	6625	6875	7125	7375	7625	7875	8125	8375	8625	8875	9125	9375	9625	9875	10125	10375	10625	10875	11125	11375	11625	11875	12125	12375
G	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	6	6	6	6	6	
H	10	10	10	10	14	14	14	14	14	14	14	18	18	18	18	18	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26	26	26	26	26	26	30	30	30	30	30
J	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	1875	1925	1975	2025	2075	2125	2175	2225	2275	2325	2375	2425	2475	2525	2575	2625	2675	2725	2775	2825
R	432	457	482	506	532	557	582	606	632	657	682	707	731	758	782	806	833	857	881	905	932	956	983	1006	1032	1056	1082	1106	1132	1156	1182	1206	1230	1256	1282	1306	1331	1357	1382	1406	1431

Mass by Stroke

Stroke	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300
Mass (kg)	54.9	56.0	57.1	58.2	59.3	60.4	61.5	62.6	63.7	64.8	65.9	67.0	68.1	69.2	70.3	71.4	72.5	73.6	74.7	75.8	76.9	78.0	79.1	80.2	81.3	82.4	83.5	84.6	85.6	86.8	87.9	89.0	90.1	91.2	92.3	93.4	94.5	95.6	96.7	97.8	98.9

■ NSA-WXMM_Extended cable track mounting direction (Ceiling-mount, standard/ET7)

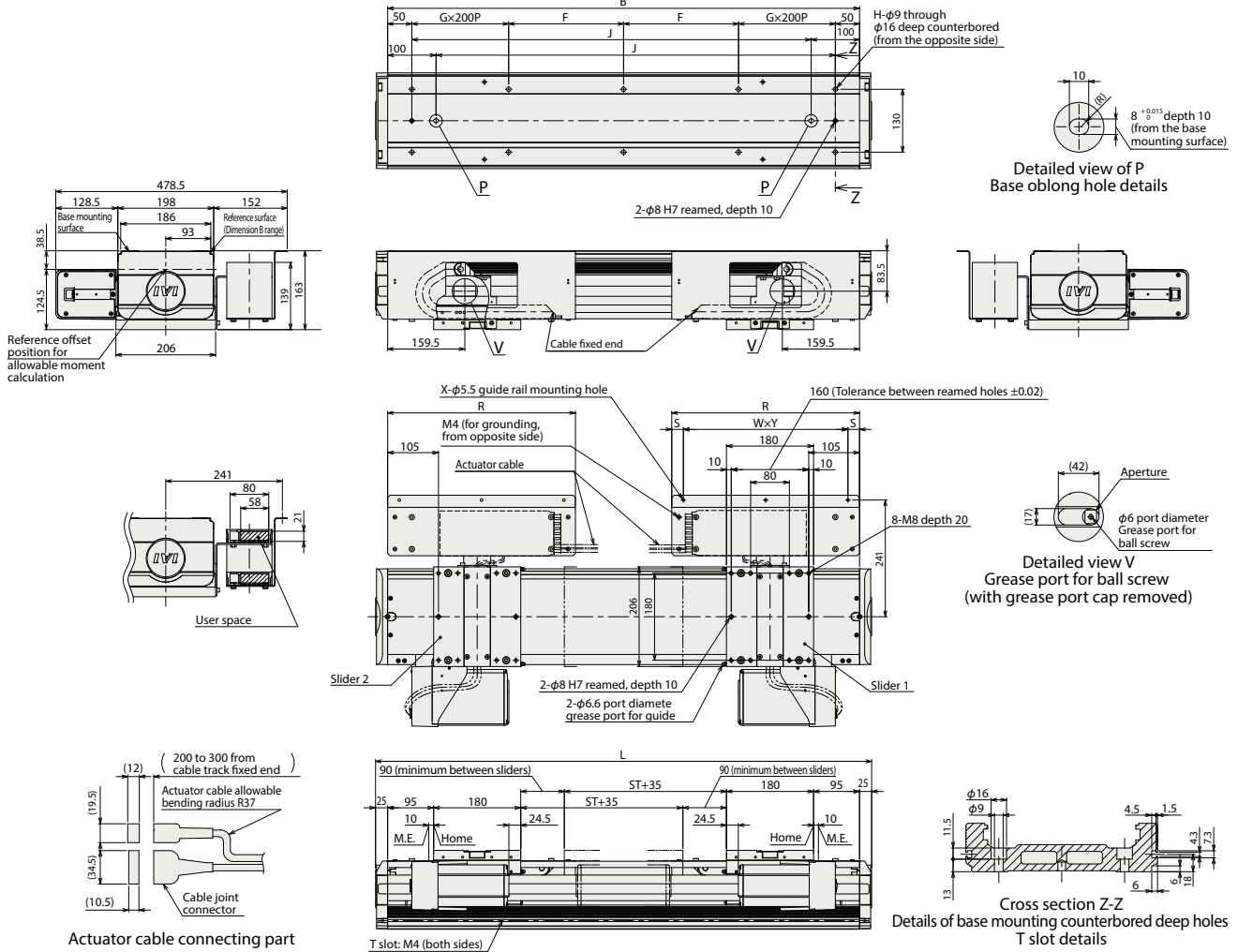
(Note) Connect the motor cable and encoder cable to the cable joint connector.

Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E

ST: Stroke

M.E: Mechanical end



■ Dimensions by Stroke

Stroke	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300					
L	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	1875	1925	1975	2025	2075	2125	2175	2225	2275	2325	2375	2425	2475	2525	2575	2625	2675	2725	2775	2825	2875	2925	2975	3025					
B	975	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	1875	1925	1975	2025	2075	2125	2175	2225	2275	2325	2375	2425	2475	2525	2575	2625	2675	2725	2775	2825	2875	2925	2975					
F	2375	2625	2875	3125	3375	3625	3875	4125	4375	4625	4875	5125	5375	5625	5875	6125	6375	6625	6875	7125	7375	7625	7875	8125	8375	8625	8875	9125	9375	9625	9875	10125	10375	10625	10875	11125	11375	11625	11875	12125	12375	12625	12875	13125	13375	13625
G	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6		
H	10	10	10	10	14	14	14	14	14	14	14	14	14	14	14	14	14	18	18	18	18	18	18	18	18	22	22	22	22	22	26	26	26	26	26	26	26	26	30	30	30	30	30	30	30	
J	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	1875	1925	1975	2025	2075	2125	2175	2225	2275	2325	2375	2425	2475	2525	2575	2625	2675	2725	2775	2825	2875	2925	2975		
R	388	413	438	462	488	513	538	562	588	613	638	662	687	714	738	762	789	813	837	861	888	912	939	963	987	1014	1038	1062	1089	1113	1137	1161	1188	1212	1238	1262	1286	1312	1338	1362	1386	1410	1434	1458	1482	
S	24	215	24	26	24	215	24	26	24	215	24	26	21	27	24	21	27	24	21	25.5	24	21	27	24	21	27	19	21	19.5	19	18.5	18	19	18.5	19	18.5	18	18.5	19	18.5	19	18.5	18	18.5	18	
W	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
X	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
Y	170	185	195	205	220	235	245	255	270	285	295	305	315	325	335	345	355	365	375	385	395	405	415	425	435	445	455	465	475	485	495	505	515	525	535	545	555	565	575	585	595	605	615	625	635	

■ Mass by Stroke

Stroke	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300				
Mass (kg)	55.7	56.8	57.9	59.0	60.1	61.2	62.3	63.4	64.5	65.6	66.7	67.8	68.8	69.9	71.0	72.1	73.3	74.4	75.5	76.6	77.6	78.7	79.8	80.9	82.0	83.1	84.2	85.4	86.4	87.5	88.6	89.7	90.8	91.9	93.0	94.1	95.2	96.3	97.5	98.6	99.7				

■ Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Power supply voltage	Control method												Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network option *										
				DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM		
RCON		16	DC24V Single phase 200VAC	●	●	●	●	●	●	●	●	●	●	●	●	128	Please contact IAI America for more information
RSEL		8	Single phase 200VAC	●	●	●	●	●	●	●	●	●	●	●	36000		
SCON-CB/CGB		1	Single phase 200VAC	●	●	●	●	●	●	●	●	●	●	●	512 (768 for network spec.)		
SSEL-CS		2	Single phase 200VAC	●	●	●	●	●	●	●	●	●	●	●	20000		
XSEL-P/Q		6	Single phase 200VAC	●	●	●	●	●	●	●	●	●	●	●	20000		
XSEL-RA/SA		8	Three-phase 200VAC	●	●	●	●	●	●	●	●	●	●	●	55000 (Depending on the type)		

(Note) For network abbreviations such as DV and CC, refer to P.7-17 of the General Catalog 2020.
 (Note) The multi-slider is controlled by either a 2-axis XSEL controller or two sets of SCONs or SSELs.

NSA-WXMXS

±10μm

Battery-less Absolute

Supporting mechanism

Body Width
200mm

750W

Model Specification Items

NSA	WXMXS	WA	750						AQ
Series	Type	Encoder Type WA Battery-less Absolute	Motor Type 750 750W	Lead 50 50mm 25 25mm	Stroke 2350 2350mm 3000 3000mm (50mm increments)	Applicable Controllers T2 SCON SSEL XSEL-P/Q XSEL-RA/SA T4 RCON RSEL	Cable Length N None S 3m M 5m X□□ Specified length	Options Refer to Options table below.	



Horizontal

Side-mount

Ceiling-mount

Vertical-mount

Stroke	NSA-WXMXS
Stroke (mm)	
2350	<input type="checkbox"/>
2400	<input type="checkbox"/>
2450	<input type="checkbox"/>
2500	<input type="checkbox"/>
2550	<input type="checkbox"/>
2600	<input type="checkbox"/>
2650	<input type="checkbox"/>
2700	<input type="checkbox"/>
2750	<input type="checkbox"/>
2800	<input type="checkbox"/>
2850	<input type="checkbox"/>
2900	<input type="checkbox"/>
2950	<input type="checkbox"/>
3000	<input type="checkbox"/>

POINT
Selection
Notes

(1) The payload in the "Main Specifications" indicates the maximum value. Please refer to the "Table of Payload by Speed/Acceleration" for more details.

(2) The center mass location of the mounted object should be less than half the overhang distance. Even when the overhang distance or load moment is within the allowable value, if abnormal vibration or noise is generated during operation, use less stringent operating conditions.

(3) The guideline for the overhang load length is 900mm or less in the Ma, Mb and Mc directions. Please refer to P.69 for more information regarding the overhang load length.

(4) Estimated allowable duty varies depending on the load factor. Please refer to P.69 for more information.

(5) Refer to P.6 for applicable mounting method.

Options * Please check the Options reference pages to confirm each option.

Name	Model	Reference Page
AQ seal (equipped as standard) (Note 1)	AQ	67
Standard cable track mounting direction (standard) (Note 2)	CT3	67
Standard cable track mounting direction (opposite) (Note 2)	CT4	67
Extended cable track mounting direction (side-mount, standard) (Note 2)	ET5	67
Extended cable track mounting direction (side-mount, opposite) (Note 2)	ET6	67
Extended cable track mounting direction (ceiling-mount, standard) (Note 2)	ET7	67
Extended cable track mounting direction (ceiling-mount, opposite) (Note 2)	ET8	67
Non-motor end specification	NM	68
No cable track (standard) (Note 2)	NT3	68
No cable track (opposite) (Note 2)	NT4	68
User cable track mounting direction (standard) (Note 2)	UM3	68
User cable track mounting direction (opposite) (Note 2)	UM4	68

(Note 1) Be sure to fill in the Model Specification Items option column.
 (Note 2) Be sure to fill in one of the codes in the Model Specification Items option column.

Cable Length

Type	Cable Code	T2	T4
Standard	S (3m)	<input type="checkbox"/>	<input type="checkbox"/>
	M (5m)	<input type="checkbox"/>	<input type="checkbox"/>
Specified length	X06 (6m) ~ X10 (10m)	<input type="checkbox"/>	<input type="checkbox"/>
	X11 (11m) ~ X15 (15m)	<input type="checkbox"/>	<input type="checkbox"/>
	X16 (16m) ~ X20 (20m)	<input type="checkbox"/>	<input type="checkbox"/>
	X21 (21m) ~ X25 (25m)	<input type="checkbox"/>	<input type="checkbox"/>
	X26 (26m) ~ X30 (30m)	<input type="checkbox"/>	<input type="checkbox"/>

Main Specifications

Item		Description	
Lead	Ball screw lead (mm)	50	25
	Max. payload (kg)	60	120
Horizontal	Speed/acceleration/ deceleration	Max. speed (mm/s)	2500
		Rated acceleration/deceleration (G)	0.3
		Max. acceleration/deceleration (G)	0.9
Thrust force	Rated thrust force (N)	255.3	510.6
	Min. stroke (mm)	2350	2350
Stroke	Max. stroke (mm)	3000	3000
	Stroke pitch (mm)	50	50

Item	Description
Drive system	Ball screw φ25mm rolled C5 or equivalent
Positioning repeatability	±0.01mm
Lost motion	Less than 0.02mm
Base	Material: Aluminum with white alumite treatment
Linear guide	Direct-acting infinite circulation type
	Ma: 774N-m
Allowable static moment	Mb: 1,106N-m
	Mc: 2,175N-m
	Ma: 162N-m
Allowable dynamic moment (Note 3)	Mb: 231N-m
	Mc: 455N-m
Ambient operating temp. & humidity	0 to 40°C, max. 85% RH or less (Non-condensing)
Degree of protection	-
Vibration resistance/shock resistance	4.9m/s ²
Compliant international standards	CE marking, RoHS Directive
Motor type	AC servo motor (200V)
Encoder type	Battery-less Absolute (17-bit)
Encoder pulse count	131072 pulse/rev

(Note 3) Assumes a standard rated life of 10,000km. The running life will vary depending on operation and installation conditions. Refer to P.1-180 of the General Catalog 2020 for operational life.

Slider Type Moment Direction

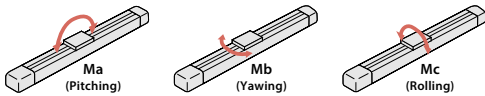


Table of Payload by Speed/Acceleration

The payload is in units of kg.

Lead (mm)	Max speed (mm/s)	Acceleration (G)							
		0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
50	2500	60	45	35	29	22	17	12	-
25	1300	120	90	70	52	40	29	20	11

Stroke and Max Speed

Stroke	2350~3000 (50mm increments)
Lead	
50	2500
25	1300

(Unit: mm/s)

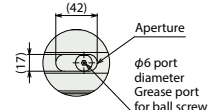
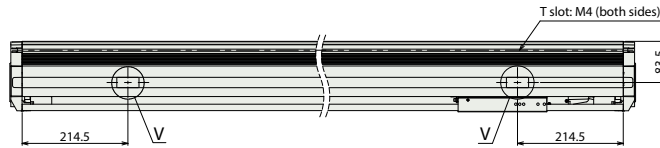
■ NSA-WXMXS_User cable track mounting direction (Standard/UM3)

(Note) Connect the motor cable and encoder cable to the cable joint connector.

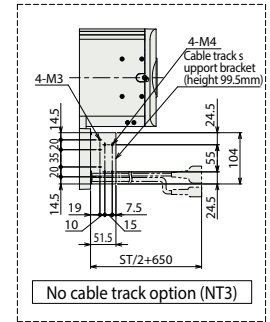
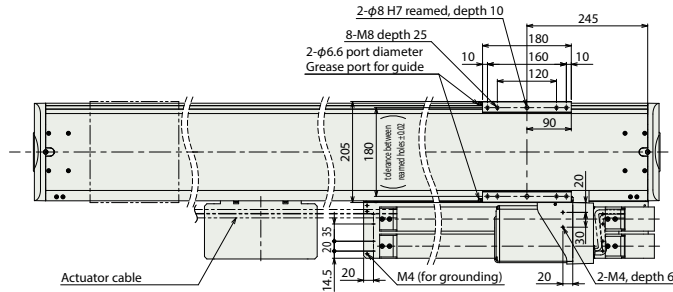
Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E

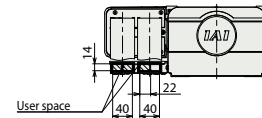
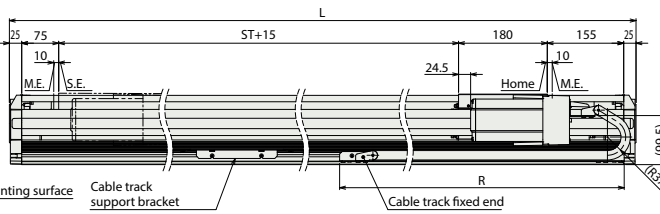
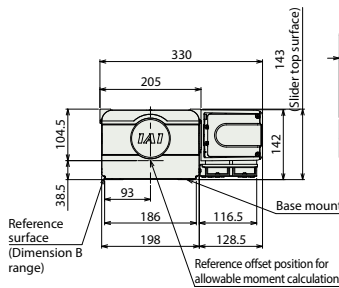
ST: Stroke
M.E: Mechanical end
S.E: Stroke end



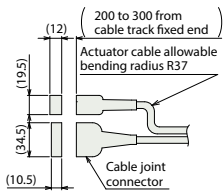
Detailed view V
Grease port for ball screw
(with grease port cap removed)



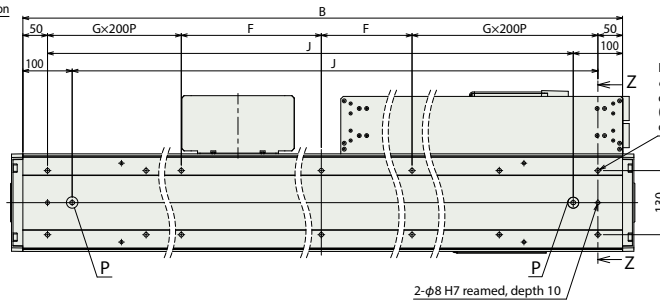
No cable track option (NT3)



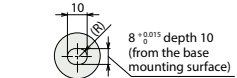
User space



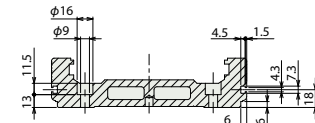
Actuator cable connecting part



H-φ9 through φ16 deep counterbored (from the opposite side)



Detail view of P
Base oblong hole details



Cross section Z-Z
Details of base mounting counterbored deep holes
T slot details

■ Dimensions by Stroke

Stroke	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000
L	2825	2875	2925	2975	3025	3075	3125	3175	3225	3275	3325	3375	3425	3475
B	2775	2825	2875	2925	2975	3025	3075	3125	3175	3225	3275	3325	3375	3425
F	137.5	162.5	187.5	212.5	237.5	262.5	287.5	312.5	137.5	162.5	187.5	212.5	237.5	262.5
G	6	6	6	6	6	6	6	6	7	7	7	7	7	7
H	30	30	30	30	30	30	30	30	34	34	34	34	34	34
J	2625	2675	2725	2775	2825	2875	2925	2975	3025	3075	3125	3175	3225	3275
R	1349	1367	1403	1421	1439	1475	1493	1529	1547	1565	1601	1619	1655	1673

■ Mass by Stroke

Mass (kg)	Stroke	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000
	With user cable track		81.4	82.6	83.7	84.9	86.0	87.2	88.4	89.5	90.7	91.8	93.0	94.1	95.3
No cable track		77.8	78.9	80.0	81.1	82.2	83.3	84.4	85.5	86.6	87.7	88.8	89.9	91.0	92.1

NSA-WXMXS_ Extended cable track mounting direction (side-mount, standard/ET5)

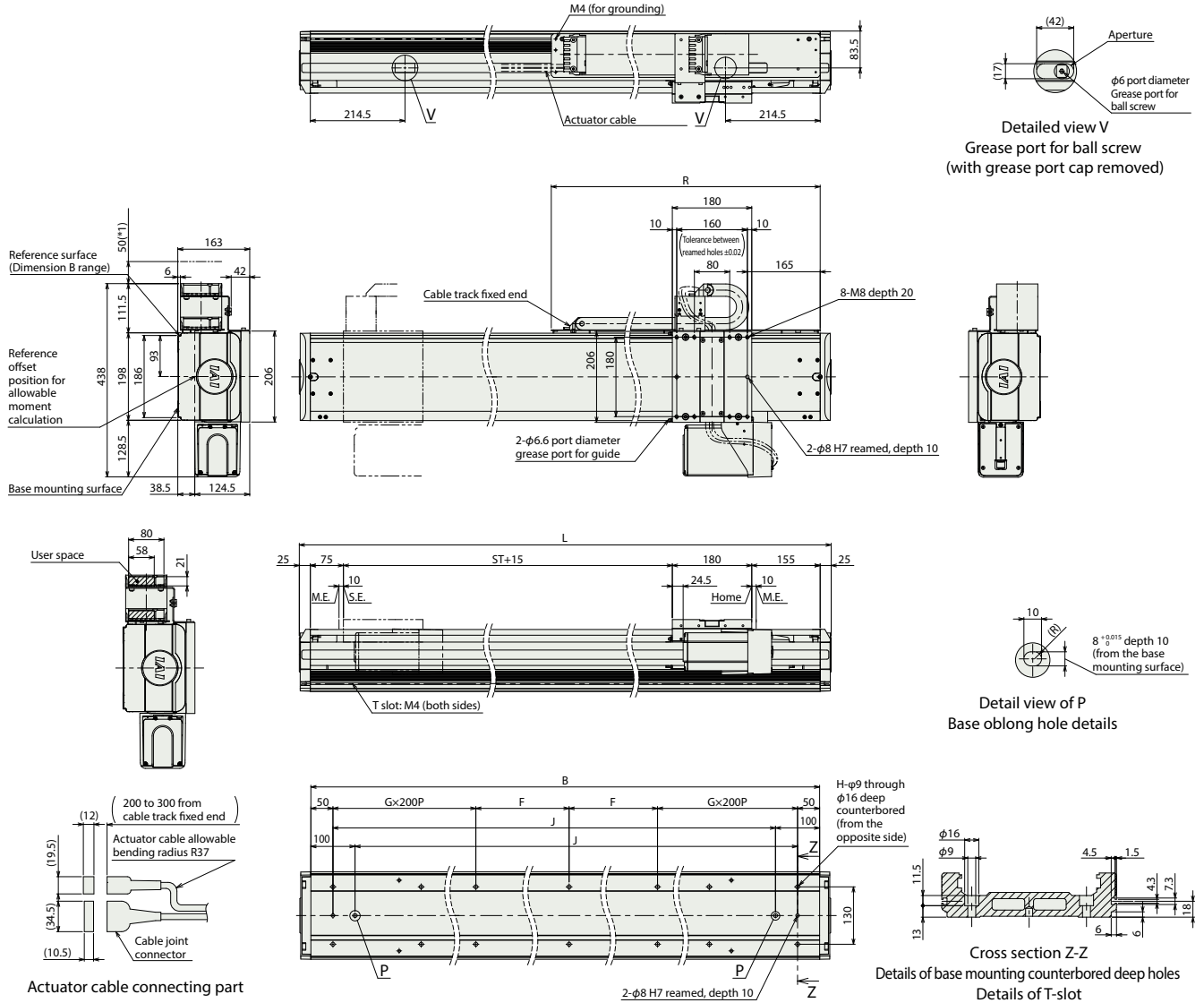
*1 Keep an appropriate space around the cable track as it may swell.

(Note) Connect the motor cable and encoder cable to the cable joint connector.

Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E

ST: Stroke
M.E: Mechanical end
S.E: Stroke end



Dimensions by Stroke

Stroke	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000
L	2825	2875	2925	2975	3025	3075	3125	3175	3225	3275	3325	3375	3425	3475
B	2775	2825	2875	2925	2975	3025	3075	3125	3175	3225	3275	3325	3375	3425
F	137.5	162.5	187.5	212.5	237.5	262.5	287.5	312.5	337.5	362.5	387.5	412.5	437.5	462.5
G	6	6	6	6	6	6	6	6	7	7	7	7	7	7
H	30	30	30	30	30	30	30	30	34	34	34	34	34	34
J	2625	2675	2725	2775	2825	2875	2925	2975	3025	3075	3125	3175	3225	3275
R	1517	1542	1566	1591	1617	1643	1667	1691	1718	1742	1766	1790	1817	1841

Mass by Stroke

Stroke	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000
Mass (kg)	82.3	83.4	84.6	85.7	86.8	88.0	89.2	90.3	91.4	92.6	93.7	94.8	96.0	97.1

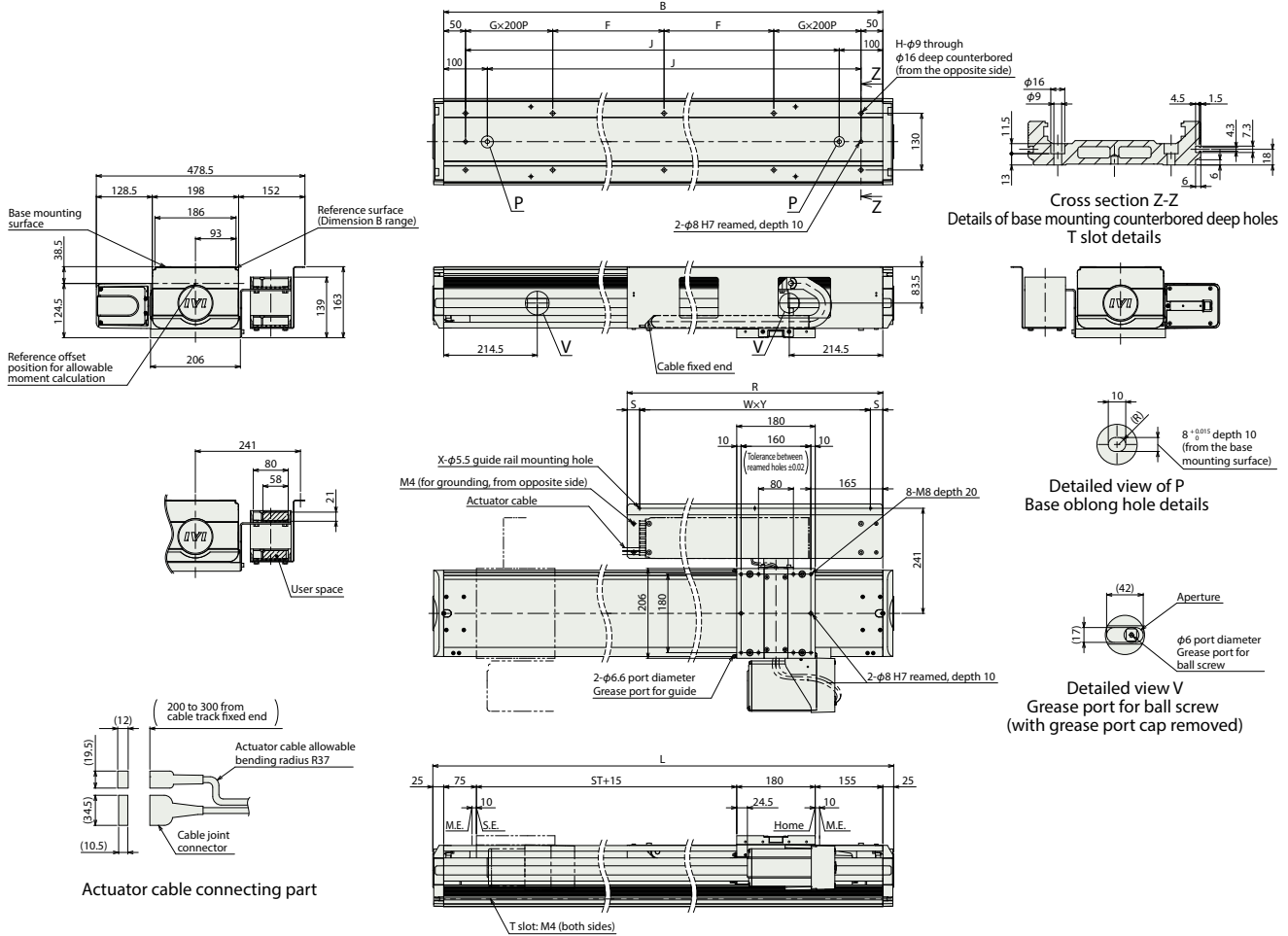
■ NSA-WXMXS_Extended cable track mounting direction (Ceiling-mount, standard/ET7)

(Note) Connect the motor cable and encoder cable to the cable joint connector.

Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E

ST: Stroke
M.E: Mechanical end
S.E: Stroke end



■ Dimensions by Stroke

Stroke	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000
L	2825	2875	2925	2975	3025	3075	3125	3175	3225	3275	3325	3375	3425	3475
B	2775	2825	2875	2925	2975	3025	3075	3125	3175	3225	3275	3325	3375	3425
F	137.5	162.5	187.5	212.5	237.5	262.5	287.5	312.5	137.5	162.5	187.5	212.5	237.5	262.5
G	6	6	6	6	6	6	6	6	7	7	7	7	7	7
H	30	30	30	30	30	30	30	30	34	34	34	34	34	34
J	2625	2675	2725	2775	2825	2875	2925	2975	3025	3075	3125	3175	3225	3275
R	1473	1498	1522	1547	1573	1598	1622	1647	1673	1698	1722	1746	1773	1797
S	24	24	23.5	23.5	24	24	23.5	28.5	26.5	24	21	18	16.5	28.5
W	5	5	5	5	5	5	5	6	6	6	6	6	6	6
X	6	6	6	6	6	6	6	7	7	7	7	7	7	7
Y	285	290	295	300	305	310	315	265	270	275	280	285	290	290

■ Mass by Stroke

Stroke	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000
Mass (kg)	83.6	84.8	85.9	87.1	88.3	89.5	90.7	91.9	93.0	94.1	95.2	96.4	97.6	98.8

■ Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Power supply voltage	Control method													Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network option *											
				DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM			
RCON		16	DC24V Single phase 200VAC	-	-	-	●	●	●	●	-	-	●	●	●	-	128	Please contact IAI America for more information
RSEL		8	Single phase 200VAC	-	-	●	●	●	●	-	-	●	●	●	-	36000		
SCON-CB/CGB		1	Single phase 200VAC	●	●	-	●	●	●	●	●	●	●	●	-	512 (768 for network spec.)		
SSEL-CS		2	Single phase 200VAC	●	-	●	-	●	-	-	-	●	-	-	-	20000		
XSEL-P/Q		6	Single phase 200VAC	-	-	●	●	●	●	-	-	●	-	-	-	20000		
XSEL-RA/SA		8	Three-phase 200VAC	-	-	●	●	●	●	-	-	●	●	-	-	55000 (Depending on the type)		

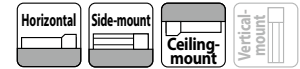
(Note) For network abbreviations such as DV and CC, refer to P.7-17 of the General Catalog 2020.

NSA-WXMXM

±10μm Standard	Battery-less Absolute	Multi Slider	Supporting mechanism	Body Width 200 mm	750 W
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■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	AQ	Options
NSA	WXMXM	WA Battery-less Absolute	750 750W	50 50mm 25 25mm	2350 2350mm 2650 2650mm (50mm increments)	T2 SCON SSEL XSEL-P/Q XSEL-RA/SA T4 RCON RSEL	N None S 3m M 5m X□□ Specified length		Refer to Options table below.



Stroke (mm)	NSA-WXMXM
2350	<input type="radio"/>
2400	<input type="radio"/>
2450	<input type="radio"/>
2500	<input type="radio"/>
2550	<input type="radio"/>
2600	<input type="radio"/>
2650	<input type="radio"/>

POINT Selection Notes

- The payload in the "Main Specifications" indicates the maximum value. Please refer to the "Table of Payload by Speed/Acceleration" for more details.
- The center mass location of the mounted object should be less than half the overhang distance. Even when the overhang distance or load moment is within the allowable value, if abnormal vibration or noise is generated during operation, use less stringent operating conditions.
- The guideline for the overhang load length is 900mm or less in the Ma, Mb and Mc directions. Please refer to P.69 for more information regarding the overhang load length.
- Estimated allowable duty varies depending on the load factor. Please refer to P.69 for more information.
- Refer to P.6 for applicable mounting method.

Options * Please check the Options reference pages to confirm each option.

Name	Model	Reference Page
AQ seal (equipped as standard) (Note 1)	AQ	67
Standard cable track mounting direction (standard) (Note 2)	CT3	67
Standard track mounting direction (opposite) (Note 2)	CT4	67
Extended cable track mounting direction (side-mount, standard) (Note 2)	ET5	67
Extended cable track mounting direction (side-mount, opposite) (Note 2)	ET6	67
Extended cable track mounting direction (ceiling-mount, standard) (Note 2)	ET7	67
Extended cable track mounting direction (ceiling-mount, opposite) (Note 2)	ET8	67
No cable track (standard) (Note 2)	NT3	68
No cable track (opposite) (Note 2)	NT4	68
User cable track mounting direction (standard) (Note 2)	UM3	68
User cable track mounting direction (opposite) (Note 2)	UM4	68

(Note 1) Be sure to fill in the Model Specification Items option column.
 (Note 2) Be sure to fill in one of the codes in the Model Specification Items option column.

Type	Cable Code	T2	T4
Standard	S(3m)	<input type="radio"/>	<input type="radio"/>
	M(5m)	<input type="radio"/>	<input type="radio"/>
Specified length	X06(6m) ~ X10(10m)	<input type="radio"/>	<input type="radio"/>
	X11(11m) ~ X15(15m)	<input type="radio"/>	<input type="radio"/>
	X16(16m) ~ X20(20m)	<input type="radio"/>	<input type="radio"/>
	X21(21m) ~ X25(25m)	<input type="radio"/>	<input type="radio"/>
	X26(26m) ~ X30(30m)	<input type="radio"/>	<input type="radio"/>

Main Specifications

Item		Description	
Lead	Ball screw lead (mm)	50	25
	Max. payload (kg)	60	120
Horizontal	Speed/acceleration/ deceleration	Max. speed (mm/s)	2500
		Rated acceleration/deceleration (G)	0.3
		Max. acceleration/deceleration (G)	0.9
Thrust force	Rated thrust force (N)	255.3	510.6
	Min. stroke (mm)	2350	2350
Stroke	Max. stroke (mm)	2650	2650
	Stroke pitch (mm)	50	50

Item	Description
Drive system	Ball screw ϕ 25mm rolled C5 or equivalent
Positioning repeatability	\pm 0.01mm
Lost motion	Less than 0.02mm
Base	Material: Aluminum with white alumite treatment
Linear guide	Direct-acting infinite circulation type
	Ma: 774N-m
	Mb: 1,106N-m
Allowable static moment	Mc: 2,175N-m
	Ma: 162N-m
Allowable dynamic moment (Note 3)	Mb: 231N-m
	Mc: 455N-m
Ambient operating temp. & humidity	0 to 40°C, max. 85% RH or less (Non-condensing)
Degree of protection	-
Vibration resistance/shock resistance	4.9m/s ²
Compliant international standards	CE marking, RoHS Directive
Motor type	AC servo motor (200V)
Encoder type	Battery-less Absolute (17-bit)
Encoder pulse count	131072 pulse/rev

(Note 3) Assumes a standard rated life of 10,000km. The running life will vary depending on operation and installation conditions. Refer to P.1-180 of the General Catalog 2020 for operational life.

Slider Type Moment Direction

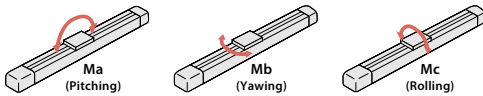


Table of Payload by Speed/Acceleration

The payload is in units of kg.

Lead (mm)	Max speed (mm/s)	Acceleration (G)							
		0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
50	2500	60	45	35	29	22	17	12	-
25	1300	120	90	70	52	40	29	20	11

Stroke and Max Speed

Lead	Stroke
	2350~2650 (50mm increments)
50	2500
25	1300

(Unit: mm/s)

■ NSA-WXMXM_Standard cable track mounting direction (Standard/CT3)

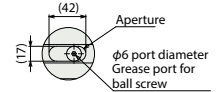
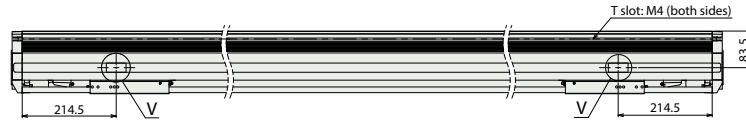
(Note) Connect the motor cable and encoder cable to the cable joint connector.

Please refer to P.70 for more information on the cable.

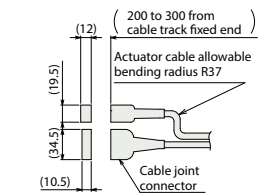
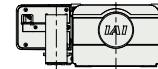
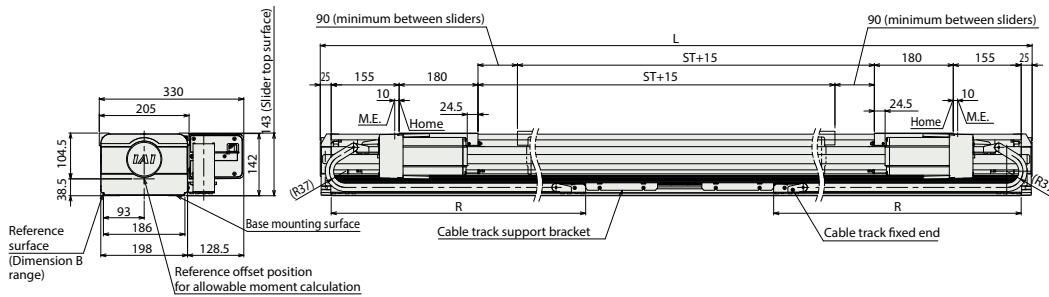
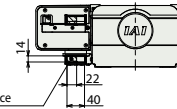
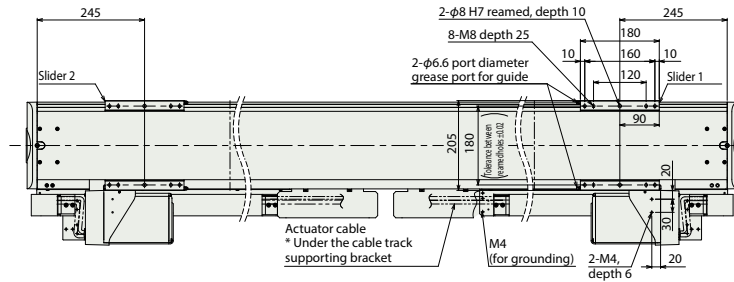
(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.

ST: Stroke

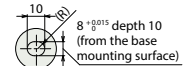
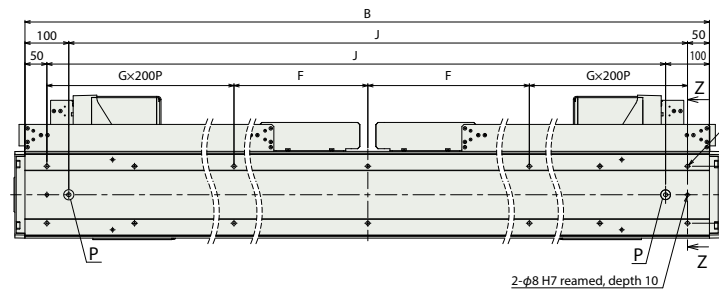
M.E: Mechanical end



Detailed view V
Grease port for ball screw
(with grease port cap removed)



Actuator cable connecting part



Detailed view of P
Base oblong hole details

Cross section Z-Z
Details of base mounting counterbored deep holes
Details of T-slot

■ Dimensions by Stroke

Stroke	2350	2400	2450	2500	2550	2600	2650
L	3175	3225	3275	3325	3375	3425	3475
B	3125	3175	3225	3275	3325	3375	3425
F	312.5	137.5	162.5	187.5	212.5	237.5	262.5
G	6	7	7	7	7	7	7
H	30	34	34	34	34	34	34
J	2975	3025	3075	3125	3175	3225	3275
R	1349	1367	1403	1421	1439	1475	1493

■ Mass by Stroke

Stroke	2350	2400	2450	2500	2550	2600	2650
Mass (kg)	102.9	104.1	105.3	106.5	107.6	108.8	109.9

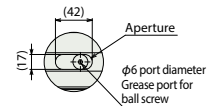
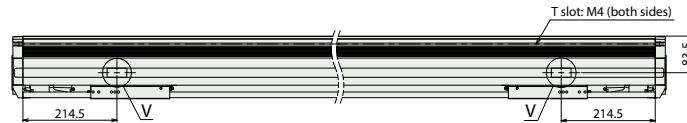
■ NSA-WXMXM_User cable track mounting direction (Standard/UM3)

(Note) Connect the motor cable and encoder cable to the cable joint connector.

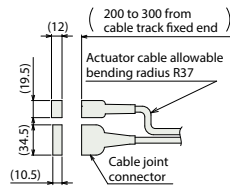
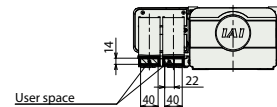
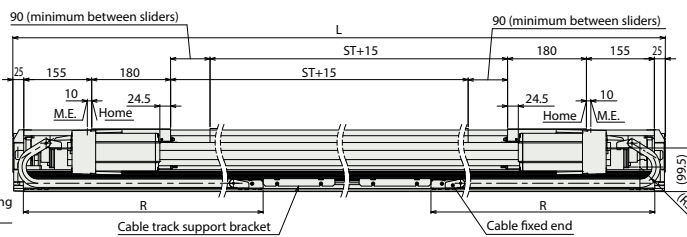
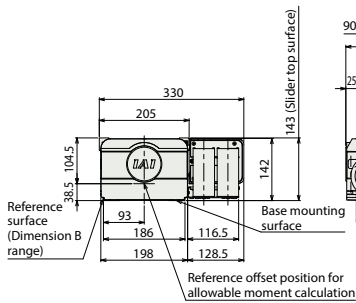
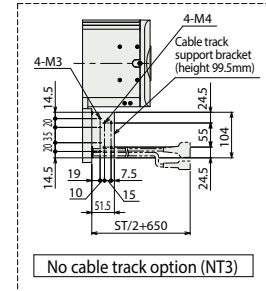
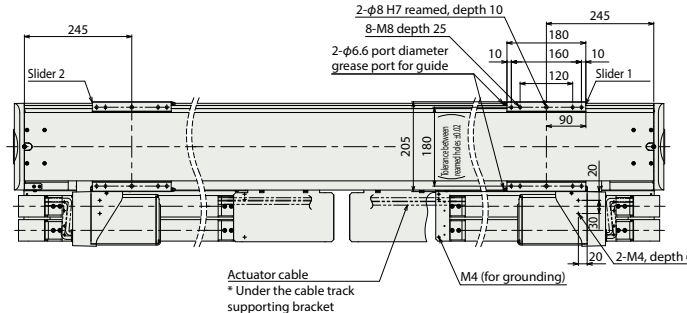
Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E

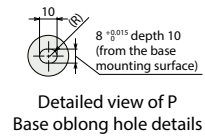
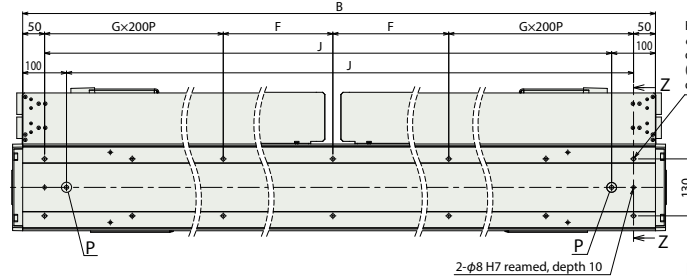
ST: Stroke
M.E: Mechanical end



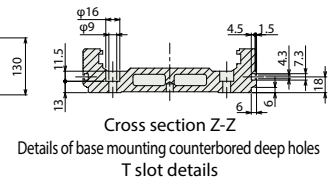
Detailed view V
Grease port for ball screw
(with grease port cap removed)



Actuator cable connecting part



Detailed view of P
Base oblong hole details



Cross section Z-Z
Details of base mounting counterbored deep holes
T slot details

■ Dimensions by Stroke

Stroke	2350	2400	2450	2500	2550	2600	2650
L	3175	3225	3275	3325	3375	3425	3475
B	3125	3175	3225	3275	3325	3375	3425
F	312.5	137.5	162.5	187.5	212.5	237.5	262.5
G	6	7	7	7	7	7	7
H	30	34	34	34	34	34	34
J	2975	3025	3075	3125	3175	3225	3275
R	1349	1367	1403	1421	1439	1475	1493

■ Mass by Stroke

Stroke		2350	2400	2450	2500	2550	2600	2650
Mass (kg)	With user cable track	105.7	106.9	108.1	109.3	110.5	111.8	112.9
	No cable track	98.7	99.8	100.9	102.0	103.1	104.2	105.3

■ NSA-WXMXM_Extended cable track mounting direction (Side-mount, standard/ET5)

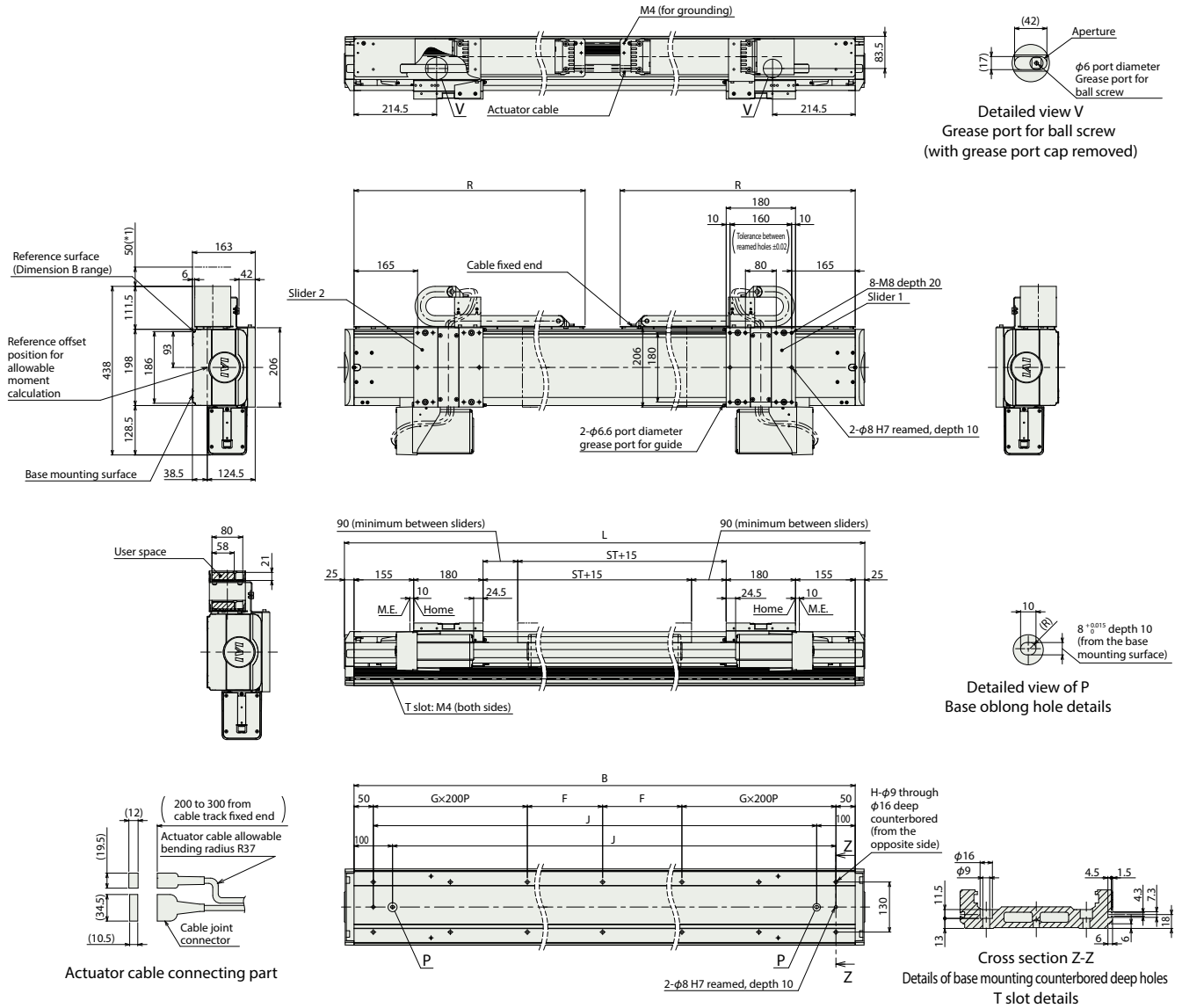
*1 Keep an appropriate space around the cable track as it may swell.

(Note) Connect the motor cable and encoder cable to the cable joint connector.

Please refer to P.70 for more information on the cable.

(Note) When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E

ST: Stroke
M.E: Mechanical end



■ Dimensions by Stroke

Stroke	2350	2400	2450	2500	2550	2600	2650
L	3175	3225	3275	3325	3375	3425	3475
B	3125	3175	3225	3275	3325	3375	3425
F	312.5	137.5	162.5	187.5	212.5	237.5	262.5
G	6	7	7	7	7	7	7
H	30	34	34	34	34	34	34
J	2975	3025	3075	3125	3175	3225	3275
R	1517	1542	1566	1591	1617	1643	1667

■ Mass by Stroke

Stroke	2350	2400	2450	2500	2550	2600	2650
Mass (kg)	106.9	108.1	109.2	110.4	111.6	112.9	114.0

AQ seal

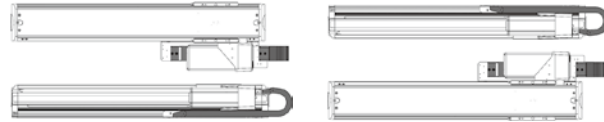
Model **AQ**

Description The AQ seal is a lubrication unit using lubrication material made of lubricating oil solidified with resin. This porous material contains a large amount of lubricating oil, characteristic in that the lubricating oil oozes to the surface via capillary action. Lubricating oil is supplied by pressing the AQ seal against the guide and ball screw surfaces (steel ball rolling contact surface), enabling long-term maintenance-free operation in combination with grease.

Standard cable track mounting direction

Model **CT3/CT4**

Description The cable track mounting direction can be selected from two types. When "opposite" is selected at the multi-slider, the numbers assigned to the slider will change.



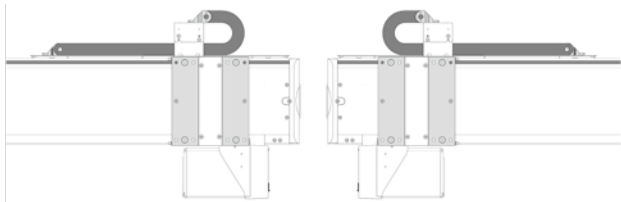
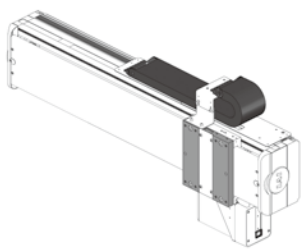
Mounting direction 3 (standard)
Symbol: CT3

Mounting direction 4 (opposite)
Symbol: CT4

Extended cable track mounting direction (Side)

Model **ET5/ET6**

Description This type is for side-mounting of the actuator. The motor is on the bottom of the slider, and the cable track is on the bottom. When "opposite" is selected at the multi-slider, the numbers assigned to the slider will change.



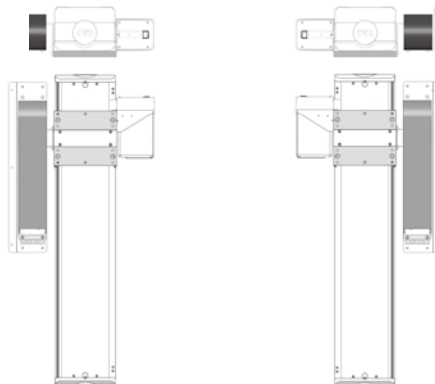
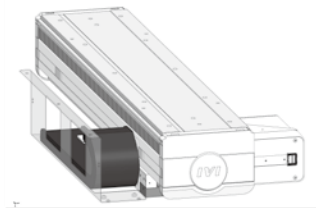
Mounting direction 5 (standard)
Code: ET5

Mounting direction 6 (opposite)
Code: ET6

Extended cable track mounting direction (Ceiling mount)

Model **ET7/ET8**

Description This type is for ceiling-mounting of the actuator. The cable track is upside down of the horizontal-mount. The guide rail is to be installed and fixed by the customer. When "opposite" is selected at the multi-slider, the numbers assigned to the slider will change.



Mounting direction 7 (standard)
Code: ET7

Mounting direction 8 (Opposite)
Code: ET8

Non-motor end specification

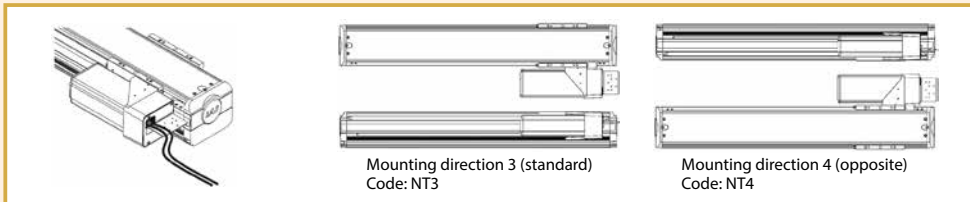
Model **NM**

Description The home position is normally located as shown "Home" in the dimensions drawing of each product. However, depending on equipment layout, the direction of home position can be changed to the opposite side as an option (as shown "S.E." in the drawing). (The home position has been adjusted prior to shipment. If the home position is changed after delivery, an adjustment is needed.)

No cable track

Model **NT3/NT4**

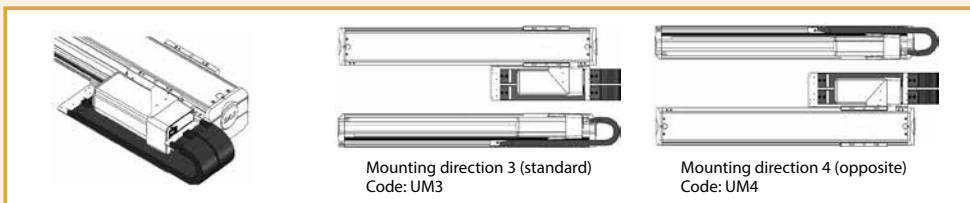
Description This type has the cable track removed.
The wiring cable in the cable track is removed.
When "opposite" is selected at the multi-slider, the numbers assigned to the slider will change.



User cable track mounting direction

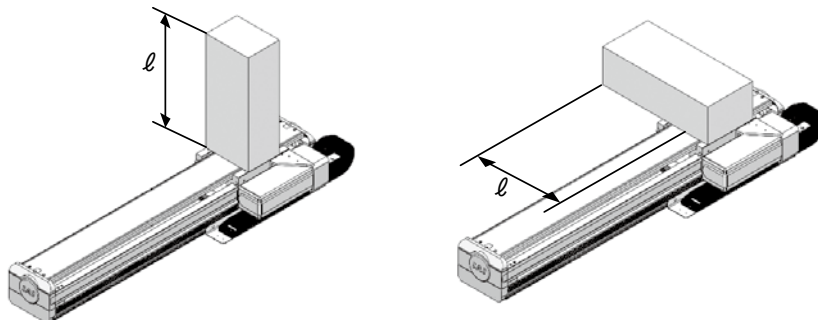
Model **UM3/UM4**

Description This type has a cable track added.
Select when capacity is insufficient with the standard cable track.
When "opposite" is selected at the multi-slider, the numbers assigned to the slider will change.



Overhang Load Length (ℓ)

This is a guideline for the offset amount that allows the actuator to operate smoothly when a workpiece or bracket is mounted offset from the actuator slider. Exceeding the guideline length too much may lead to failure due to vibration, etc. Adhere to the guideline length or less for use. Please refer to the pages of each model for detailed values. Also, refer to the Dimensions of the applicable model for the reference offset position for allowable moment calculation.

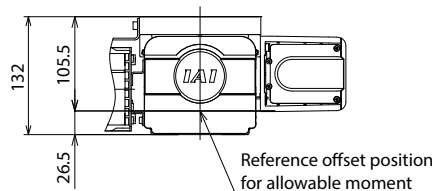
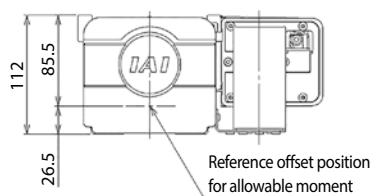


<Reference offset position>

* Calculate Ma and Mc moments based on the position of the arrow.

(ex.) NSA-MXMS (horizontal - flat mount)

(ex.) NSA-MXMS (horizontal - side mount / ceiling mount)



Duty

Duty ratio is the percentage of the actuator's active operation time (the ratio of actuator's operation in one cycle).

Use the duty ratio within the guidelines calculated as below.

Using the product beyond the duty ratio guidelines may cause overload or overheating in the motor. The duty ratio exceeding the guidelines too much may cause damage to the motor.

$$\text{Duty ratio} = \frac{\text{Operating time}}{\text{Operating time} + \text{Stop time}} [\%]$$

Note: If an overload error occurs, extend the stop time to lower the duty ratio or reduce the acceleration.

[Calculating duty ratio]

Calculate according to the method below.

Note that M size lead 30 is to be used at 50% duty ratio regardless of conditions such as load factor, etc.

(1) Calculate load factor LF.

[When acceleration/deceleration command is at or below rated acceleration/deceleration]

$$\text{Load factor: LF} = \frac{M \times \alpha}{M_r \times \alpha_r} [\%]$$

Max. payload of rated acceleration : M_r [kg]
 Rated acceleration/deceleration : α_r [G]
 Payload during operation : M [kg]
 Acceleration/deceleration during operation: α (G)

[When acceleration/deceleration command is higher than rated acceleration/deceleration]

$$\text{Load factor: LF} = \frac{M \times \alpha}{M_d \times \alpha} = \frac{M}{M_d} [\%]$$

Payload of designated acceleration : M_d
 Payload during operation : M
 Acceleration/deceleration during operation: α

Caution: For the rated acceleration/deceleration and payload, refer to the "Main Specifications" of each model

(2) Determine the usable duty ratio from the calculated load factor LF and the table below.

Load factor LF	100%	90%	80%	70%	60%	50% or less
Duty ratio	50%	56%	63%	70%	78%	100%

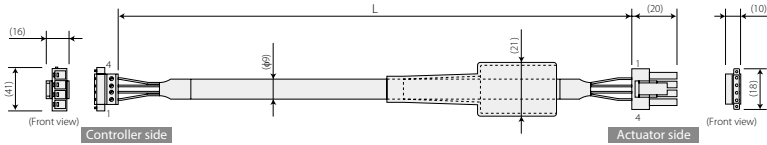
Maintenance Parts

When placing an order for a replacement cable, please use the model name shown below.

Series	Applicable Controllers	Connecting cable	
		Motor robot cable	Encoder robot cable
NSA	T2	CB-X-MA □□□	CB-X1-PA □□□
	T4	CB-X2-MA □□□	

Model Name **CB-X-MA**□□□

* Please indicate the cable length (L) in □□□, maximum 30m (ex.) 080=8m

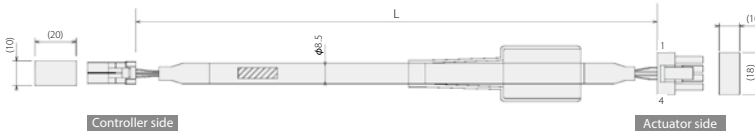


GIC 2.5/4-STF-7.62 (Phoenix)				SLP-04V (J.S.T. MFG. Co., Ltd.)			
Wiring	Color	Signal	No.	No.	Signal	Color	Wiring
0.75sq	Green	PE	1	1	U	Red	0.75sq (Crimped)
	Red	U	2	2	V	White	
	White	V	3	3	W	Black	
	Black	W	4	4	PE	Green	

Minimum bending radius $r = 51$ mm or more (Dynamic bending condition)
* Only the robot cable is available for this model.

Model Name **CB-X2-MA**□□□

* Please indicate the cable length (L) in □□□, maximum 30m (ex.) 080=8m

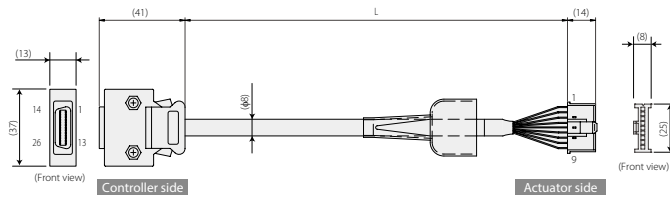


F35FDC-04V-K (J.S.T. MFG. Co., Ltd.)				SLP-04V (J.S.T. MFG. Co., Ltd.)			
Wiring	Color	Signal	No.	No.	Signal	Color	Wiring
0.75sq	Red	U	B1	1	U	Red	0.75sq (Crimped)
	White	V	B2	2	V	White	
	Black	W	A1	3	W	Black	
	Green	PE	A2	4	PE	Green	

Minimum bending radius $r = 51$ mm or more (Dynamic bending condition)
* Only the robot cable is available for this model.

Model Name: **CB-X1-PA**□□□

* Please indicate the cable length (L) in □□□, maximum 30m (ex.) 080=8m



10126-3000PE (Sumitomo 3M)				XMP-09V (J.S.T. MFG. Co., Ltd.)			
Wiring	Color	Signal	No.	No.	Signal	Color	Wiring
-	-	-	10	1	BAT+	Purple	AWG26 (Crimped)
-	-	-	11	2	BAT-	Gray	
-	-	E24V	12	3	SD	Orange	
-	-	0V	13	4	SD	Green	
-	-	LS	26	5	VCC	Red	
-	-	CREEP	25	6	GND	Black	
-	-	OT	24	7	FG	Drain	
-	-	RSV	23	8	BK-	Blue	
-	-	-	9	9	BK+	Yellow	
-	-	-	18				
-	-	-	19				
-	-	A+	1				
-	-	A-	2				
-	-	B+	3				
-	-	B-	4				
-	-	Z+	5				
-	-	Z-	6				
Orange	SRD+	7					
Green	SRD-	8					
Purple	BAT+	14					
Gray	BAT-	15					
Red	VCC	16					
Black	GND	17					
Blue	BKR-	20					
Yellow	BKR+	21					
-	-	-	22				

Shield is clamp connected to the hood

Ground wire and braided shield

Minimum bending radius $r = 44$ mm or more (Dynamic bending condition)
* Only the robot cable is available for this model.

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The information contained in this product brochure may change without prior notice due to product improvements.

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