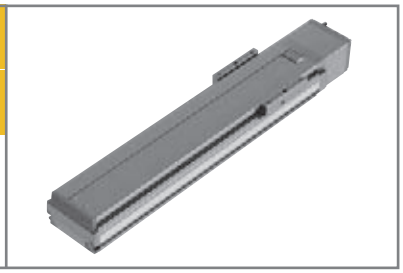
ISB-SXM-WA
Single-axis robot/Small, X-axis, standard slider type/Actuator width: 90mm/60W
Straight shape

ISPB-SXM-WA
Single-axis robot/Small, X-axis, standard slider type/Actuator width: 90mm/60W
Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISB: Standard specification ISPB: High precision specification	SXM	WA: Battery-less Absolute specification	60: 60W	16: 16mm 8: 8mm 4: 4mm	100: 100mm 〜 900: 900mm (in 50mm increments)	T2: SCON MSCON SSEL XSEL	N: None S: 3m M: 5m X□□: Spec.length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg)** Rated acceleration	Payload (Note 1) Vertical (kg)** Maximum acceleration	Rated thrust (N)
ISB[ISPB]-SXM-WA-60-16-① -T2- ② - ③	Battery-less Absolute	60	16	100~900	1~960	0.4	1.2	0.4	0.8	13	3.5	3.5	2	53.1
ISB[ISPB]-SXM-WA-60-8-① -T2- ② - ③			8		1~480	0.4	0.7	0.4	0.6	27	12	7	5	106.1
ISB[ISPB]-SXM-WA-60-4-① -T2- ② - ③			4		1~240	0.2	0.5	0.2	0.4	55	30	14	12	212.3

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).
**If the guide with ball retention mechanism (RT) is used, the vertical payload decreases by 0.5kg. (Please also refer to P.9).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
Double slider	W	P56-1	High straightness, precision specification	ST	P13
-	-	-	Metal cable joint connector (standard feature)	EU	P12

Common Specifications

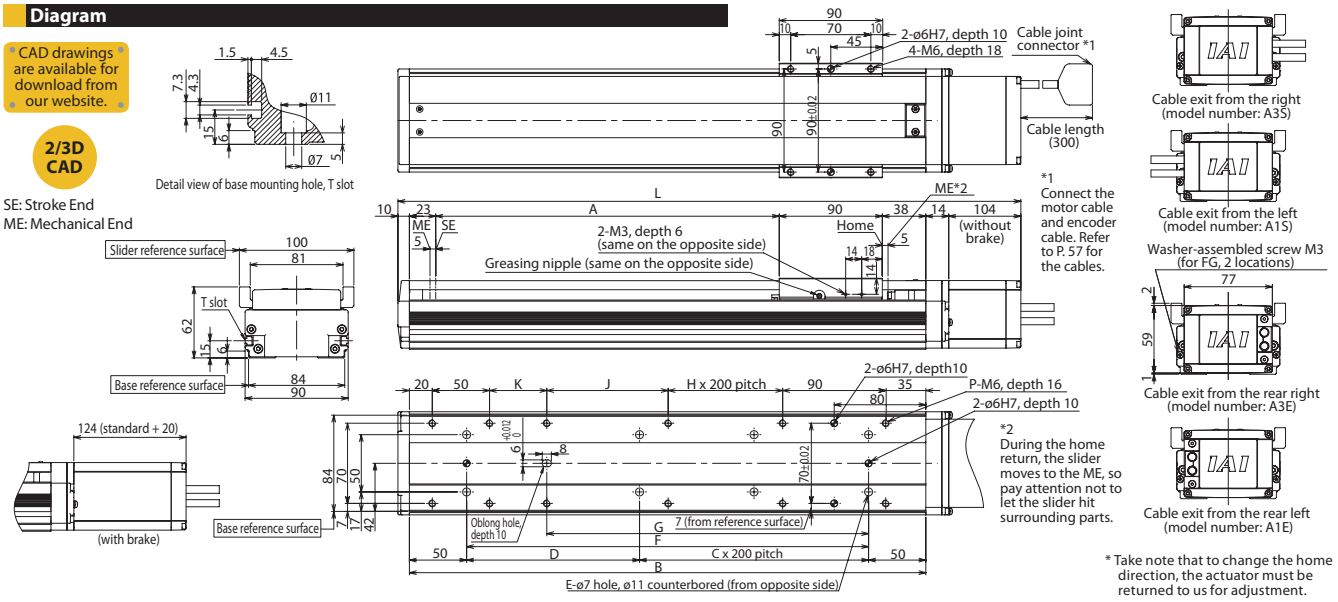
Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screwØ12mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 32.9N•m Mb: 47.0N•m Mc: 76.8N•m
Overhang load length	Ma direction: 450mm max. Mb, Mc directions: 450mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Diagram

CAD drawings are available for download from our website.

2/3D CAD

SE: Stroke End
ME: Mechanical End



* Take note that to change the home direction, the actuator must be returned to us for adjustment.

■ Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.3 kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
L	without brake	379	429	479	529	579	629	679	729	779	829	879	929	979	1029	1079	1129	1179
	with brake	399	449	499	549	599	649	699	749	799	849	899	949	999	1049	1099	1149	1199
A		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
B		251	301	351	401	451	501	551	601	651	701	751	801	851	901	951	1001	1051
C		0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4
D		151	201	251	101	151	201	251	101	151	201	251	101	151	201	251	101	151
E		4	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12
F		151	201	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951
G		131	131	181	231	281	331	381	431	481	531	581	631	681	731	781	831	881
H		0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3
J		56	56	106	156	206	256	106	156	206	256	106	156	206	256	106	156	206
K		0	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
P		8	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
Mass (kg)		3.0	3.4	3.8	4.2	4.5	4.9	5.2	5.6	5.9	6.3	6.6	7.0	7.3	7.7	8.0	8.4	8.7
Maximum speed (mm/s)	Lead 16	960											655		515		415	
	Lead 8	480											330		260		210	
	Lead 4	240											165		130		100	

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

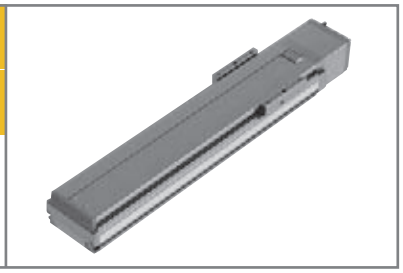
(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISB-SXL-WA

Single-axis robot/Small, X-axis, long slider type/Actuator width: 90mm/60W
Straight shape

ISPB-SXL-WA

Single-axis robot/Small, X-axis, long slider type/Actuator width: 90mm/60W
Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
—	SXL	WA	60	—	—	T2	—	—
ISB: Standard specification ISPB: High precision specification		WA: Battery-less Absolute specification	60: 60W	16: 16mm 8: 8mm 4: 4mm	130: 130mm ~ 880: 880mm (in 50 mm increments)	T2: SCON MSCON SSEL XSEL	N: None S: 3m M: 5m X□□: Spec. length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm increments (mm)	Speed (mm/s)	Acceleration (Note 1)				Payload (Note 1)				Rated thrust (N)
						Horizontal (G)		Vertical (G)		Horizontal (kg)		Vertical (kg)		
						Rated	Maximum	Rated	Maximum	Rated acceleration	Maximum acceleration	Rated acceleration	Maximum acceleration	
ISB[ISPB]-SXL-WA-60-16-①-T2-②-③	Battery-less Absolute	60	16	130~880	1~960	0.4	1.2	0.4	0.8	13	3.5	3.5	2	53.1
ISB[ISPB]-SXL-WA-60-8-①-T2-②-③			8		1~480	0.4	0.7	0.4	0.6	27	12	7	5	106.1
ISB[ISPB]-SXL-WA-60-4-①-T2-②-③			4		1~240	0.2	0.5	0.2	0.4	55	30	14	12	212.3

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	-	-	-
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
Double slider	W	P56-1	High straightness, precision specification	ST	P13
-	-	-	Metal cable joint connector (standard feature)	EU	P12

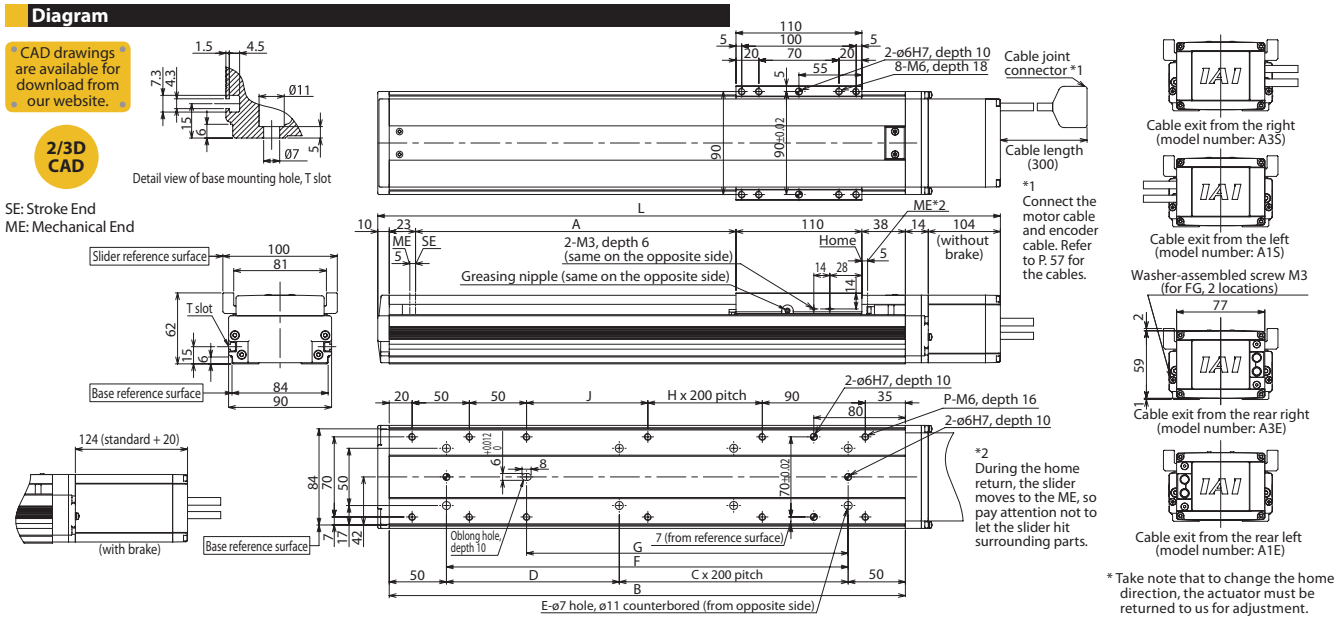
Common Specifications

Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screwØ12mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 46.3N•m Mb: 66.2N•m Mc: 89.0N•m
Overhang load length	Ma direction: 550mm max. Mb, Mc directions: 550mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Diagram

CAD drawings are available for download from our website.

2/3D CAD



Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.3 kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		130	180	230	280	330	380	430	480	530	580	630	680	730	780	830	880
L	without brake	429	479	529	579	629	679	729	779	829	879	929	979	1029	1079	1129	1179
	with brake	449	499	549	599	649	699	749	799	849	899	949	999	1049	1099	1149	1199
A		130	180	230	280	330	380	430	480	530	580	630	680	730	780	830	880
B		301	351	401	451	501	551	601	651	701	751	801	851	901	951	1001	1051
C		0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4
D		201	251	101	151	201	251	101	151	201	251	101	151	201	251	101	151
E		4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12
F		201	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951
G		131	181	231	281	331	381	431	481	531	581	631	681	731	781	831	881
H		0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3
J		56	106	156	206	256	106	156	206	256	106	156	206	256	106	156	206
P		10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
Mass (kg)		3.1	3.5	3.9	4.3	4.6	5.0	5.3	5.7	6.0	6.4	6.7	7.1	7.4	7.8	8.1	8.5
Maximum speed (mm/s)	Lead 16	960										655		515		415	
	Lead 8	480										330		260		210	
	Lead 4	240										165		130		100	

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

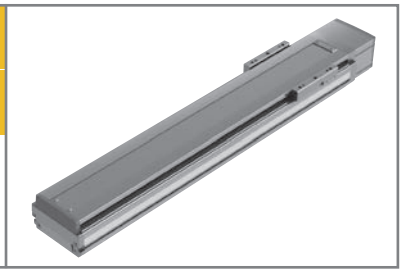
(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISB-MXM-WA-100

Single-axis robot/Medium, X-axis, standard slider type/Actuator width: 120mm/100W Straight shape

ISPB-MXM-WA-100

Single-axis robot/Medium, X-axis, standard slider type/Actuator width: 120mm/100W Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
	MXM	WA	100			T2		
ISB: Standard specification ISPB: High precision specification		WA: Battery-less Absolute specification	100: 100W	30: 30mm 20: 20mm 10: 10mm 5 : 5mm	100: 100mm ~ 1100: 1100mm (in 50 mm increments)	T2: SCON MSCON SSEL XSEL	N : None S : 3m M: 5m X□□: Spec. length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg)** Rated acceleration	Payload (Note 1) Vertical (kg)** Maximum acceleration	Rated thrust (N)
ISB[ISPB]-MXM-WA-100-30-①-T2-②-③	Battery-less Absolute	100	30	100~1100	1~1800	0.4	1.2	0.4	1.2	15	3	2.5	1	56.6
ISB[ISPB]-MXM-WA-100-20-①-T2-②-③			20		1~1200	0.4	1.2	0.4	1	23	6	5	2.5	84.9
ISB[ISPB]-MXM-WA-100-10-①-T2-②-③			10		1~600	0.4	0.7	0.4	0.6	45	20	10	7	169.8
ISB[ISPB]-MXM-WA-100-5-①-T2-②-③			5		1~300	0.2	0.5	0.2	0.4	85	45	20	15	339.7

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).
**If the guide with ball retention mechanism (RT) is used, the vertical payload decreases by 0.5kg. (Please also refer to P.9).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
Double slider	W	P56-1	High straightness, precision specification	ST	P13
-	-	-	Metal cable joint connector (standard feature)	EU	P12

Common Specifications

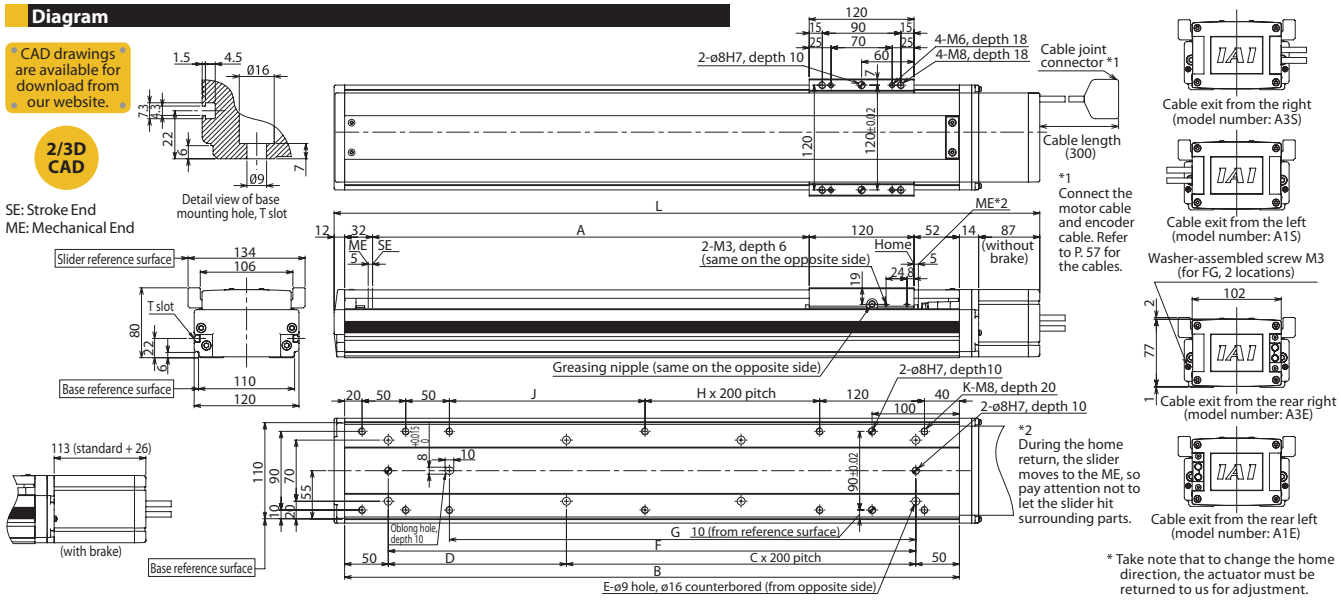
Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screwØ16mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 81.0N•m Mb: 116.0N•m Mc: 189.0N•m
Overhang load length	Ma direction: 600mm max. Mb, Mc directions: 600mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Diagram

CAD drawings are available for download from our website.

2/3D CAD

SE: Stroke End
ME: Mechanical End



* Take note that to change the home direction, the actuator must be returned to us for adjustment.

Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.5kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L	without brake	417	467	517	567	617	667	717	767	817	867	917	967	1017	1067	1117	1167	1217	1267	1317	1367	1417
	with brake	443	493	543	593	643	693	743	793	843	893	943	993	1043	1093	1143	1193	1243	1293	1343	1393	1443
A		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
B		304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
C		0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
D		204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
E		4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
F		204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
G		134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
H		0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
J		24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
K		10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
Mass (kg)		6.0	6.6	7.2	7.9	8.5	9.2	9.8	10.4	11.0	11.7	12.3	13.0	13.6	14.2	14.8	15.5	16.1	16.8	17.4	18.1	18.7
Maximum speed (mm/s)	Lead 30	1800													1290		1045		860		690	
	Lead 20	1200													860		695		570		460	
	Lead 10	600													430		345		280		230	
	Lead 5	300													215		170		140		115	

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISB-MXM-WA-200

Single-axis robot/Medium, X-axis, standard slider type/Actuator width: 120mm/200W Straight shape

ISPB-MXM-WA-200

Single-axis robot/Medium, X-axis, standard slider type/Actuator width: 120mm/200W Straight shape **High precision specification**

Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
—	MXM	WA	200	—	—	T2	—	—
ISB: Standard specification ISPB: High precision specification		WA: Battery-less Absolute specification	200: 200W	30: 30mm 20: 20mm 10: 10mm 5 : 5mm	100: 100mm 〜 1100: 1100mm (in 50 mm increments)	T2: SCON MSCON SSEL XSEL	N : None S : 3m M: 5m X□□:Spec.length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg) Rated acceleration	Payload (Note 1) Vertical (kg) Maximum acceleration	Rated thrust (N)
ISB[ISPB]-MXM-WA-200-30-①-T2-②-③	Battery-less Absolute	200	30	100~1100	1~1800	0.4	1.2	0.4	1.2	30	9	6	2	113.9
ISB[ISPB]-MXM-WA-200-20-①-T2-②-③			20		1~1200	0.4	1.2	0.4	1	45	12	10	5	170.9
ISB[ISPB]-MXM-WA-200-10-①-T2-②-③			10		1~600	0.4	0.7	0.4	0.6	90	40	20	15	341.8
ISB[ISPB]-MXM-WA-200-5-①-T2-②-③			5		1~300	0.2	0.5	0.2	0.4	110	80	40	30	683.6

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
Double slider	W	P56-1	High straightness, precision specification	ST	P13
-	-	-	Metal cable joint connector (standard feature)	EU	P12

Common Specifications

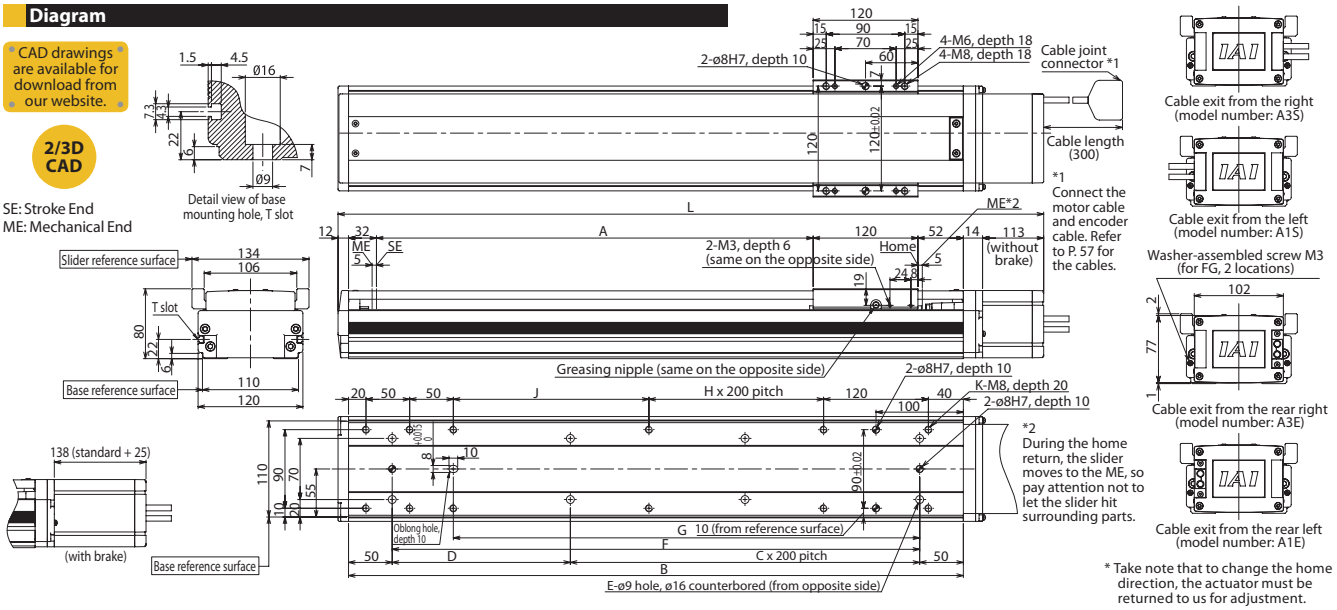
Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screwø16mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 81.0N•m Mb: 116.0N•m Mc: 189.0 N•m
Overhang load length	Ma direction: 600mm max. Mb, Mc directions: 600mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Diagram

CAD drawings are available for download from our website.

2/3D CAD

SE: Stroke End
ME: Mechanical End



* Take note that to change the home direction, the actuator must be returned to us for adjustment.

■ Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.6kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L	without brake	443	493	543	593	643	693	743	793	843	893	943	993	1043	1093	1143	1193	1243	1293	1343	1393	1443
	with brake	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368	1418	1468
A		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
B		304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
C		0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
D		204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
E		4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
F		204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
G		134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
H		0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
J		24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
K		10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
Mass (kg)		6.4	7.1	7.7	8.4	9.0	9.6	10.2	10.9	11.5	12.2	12.8	13.4	14.0	14.7	15.3	16.0	16.6	17.3	17.9	18.5	19.1
Maximum speed (mm/s)	Lead 30	1800													1290		1045		860		690	
	Lead 20	1200													860		695		570		460	
	Lead 10	600													430		345		280		230	
	Lead 5	300													215		170		140		115	

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

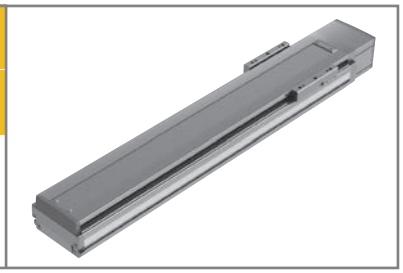
(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISB-MXL-WA-100

Single-axis robot/Medium, X-axis, long slider type/Actuator width: 120mm/100W Straight shape

ISPB-MXL-WA-100

Single-axis robot/Medium, X-axis, long slider type/Actuator width: 120mm/100W Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
—	MXL	WA	100	—	—	T2	—	—
ISB: Standard specification ISPB: High precision specification		WA: Battery-less Absolute specification	100: 100W	30: 30mm 20: 20mm 10: 10mm 5 : 5mm	120: 120mm 〜 1070: 1070mm (in 50 mm increments)	T2: SCON MSCON SSEL XSEL	N : None S : 3m M: 5m X□□: Spec.length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg) Rated acceleration	Payload (Note 1) Vertical (kg) Maximum acceleration	Rated thrust (N)
ISB[ISPB]-MXL-WA-100-30-①-T2-②-③	Battery-less Absolute	100	30	120~1070	1~1800	0.4	1.2	0.4	1.2	15	3	2.5	1	56.6
ISB[ISPB]-MXL-WA-100-20-①-T2-②-③			20		1~1200	0.4	1.2	0.4	1	23	6	5	2.5	84.9
ISB[ISPB]-MXL-WA-100-10-①-T2-②-③			10		1~600	0.4	0.7	0.4	0.6	45	20	10	7	169.8
ISB[ISPB]-MXL-WA-100-5-①-T2-②-③			5		1~300	0.2	0.5	0.2	0.4	85	45	20	15	339.7

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	-	-	-
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
Double slider	W	P56-1	High straightness, precision specification	ST	P13
-	-	-	Metal cable joint connector (standard feature)	EU	P12

Common Specifications

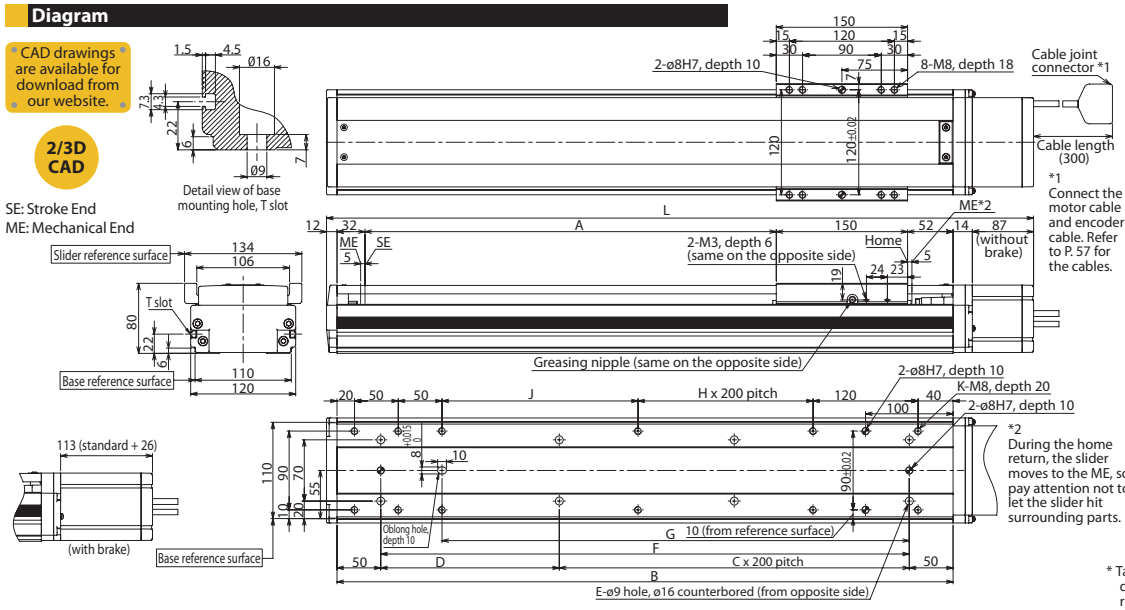
Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screwØ16mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 123.0N•m Mb: 176.0N•m Mc: 227.0N•m
Overhang load length	Ma direction: 750mm max. Mb, Mc directions: 750mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

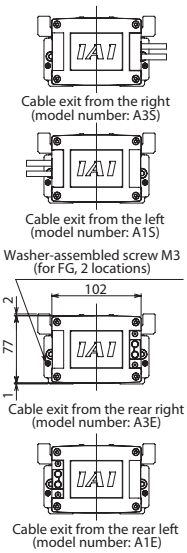
Diagram

CAD drawings are available for download from our website.

2/3D CAD

SE: Stroke End
ME: Mechanical End





* Take note that to change the home direction, the actuator must be returned to us for adjustment.

■ Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.5kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070
L	without brake	467	517	567	617	667	717	767	817	867	917	967	1017	1067	1117	1167	1217	1267	1317	1367	1417
	with brake	493	543	593	643	693	743	793	843	893	943	993	1043	1093	1143	1193	1243	1293	1343	1393	1443
A		120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070
B		354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
C		0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
D		254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
E		4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
F		254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
G		184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
H		0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
J		74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
K		10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
Mass (kg)		6.3	6.9	7.5	8.2	8.8	9.5	10.1	10.7	11.3	12.0	12.6	13.3	13.9	14.5	15.1	15.8	16.4	17.1	17.7	18.4
Maximum speed (mm/s	Lead 30	1800												1290		1045		860		690	
	Lead 20	1200												860		695		570		460	
	Lead 10	600												430		345		280		230	
	Lead 5	300												215		170		140		115	

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISB-MXL-WA-200

Single-axis robot/Medium, X-axis, long slider type/Actuator width: 120mm/200W Straight shape

ISPB-MXL-WA-200

Single-axis robot/Medium, X-axis, long slider type/Actuator width: 120mm/200W Straight shape **High precision specification**

Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
—	MXL	WA	200	—	—	T2	—	—
ISB: Standard specification ISPB: High precision specification		WA: Battery-less Absolute specification	200: 200W	30: 30mm 20: 20mm 10: 10mm 5 : 5mm	120: 120mm 〜 1070: 1070mm (in 50 mm increments)	T2: SCON MSCON SSEL XSEL	N : None S : 3m M: 5m X□□: Spec. length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg) Rated acceleration	Payload (Note 1) Vertical (kg) Maximum acceleration	Rated thrust (N)
ISB[ISPB]-MXL-WA-200-30-①-T2-②-③	Battery-less Absolute	200	30	120~1070	1~1800	0.4	1.2	0.4	1.2	30	9	6	2	113.9
ISB[ISPB]-MXL-WA-200-20-①-T2-②-③			20		1~1200	0.4	1.2	0.4	1	45	12	10	5	170.9
ISB[ISPB]-MXL-WA-200-10-①-T2-②-③			10		1~600	0.4	0.7	0.4	0.6	90	40	20	15	341.8
ISB[ISPB]-MXL-WA-200-5-①-T2-②-③			5		1~300	0.2	0.5	0.2	0.4	110	80	40	30	683.6

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	-	-	-
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
Double slider	W	P56-1	High straightness, precision specification	ST	P13
-	-	-	Metal cable joint connector (standard feature)	EU	P12

Common Specifications

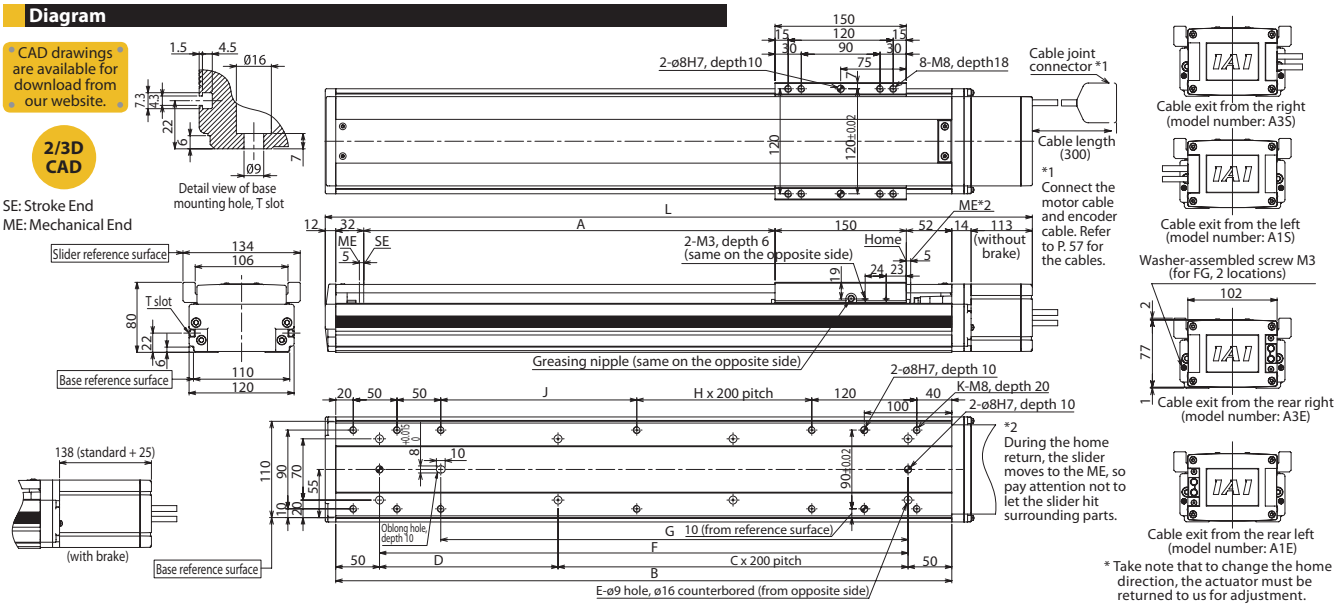
Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screwØ16mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 123.0N•m Mb: 176.0N•m Mc: 227.0N•m
Overhang load length	Ma direction: 750mm max. Mb, Mc directions: 750mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Diagram

CAD drawings are available for download from our website.

2/3D CAD

SE: Stroke End
ME: Mechanical End



* Take note that to change the home direction, the actuator must be returned to us for adjustment.

■ Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.6kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070
L	without brake	493	543	593	643	693	743	793	843	893	943	993	1043	1093	1143	1193	1243	1293	1343	1393	1443
	with brake	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368	1418	1468
A		120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070
B		354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
C		0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
D		254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
E		4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
F		254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
G		184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
H		0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
J		74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
K		10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
Mass (kg)		6.7	7.4	8.0	8.7	9.3	9.9	10.5	11.2	11.8	12.5	13.1	13.7	14.3	15.0	15.6	16.3	16.9	17.6	18.2	18.9
Maximum speed (mm/s)	Lead 30	1800												1290		1045		860		690	
	Lead 20	1200												860		695		570		460	
	Lead 10	600												430		345		280		230	
	Lead 5	300												215		170		140		115	

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

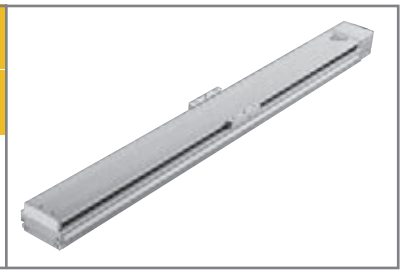
(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISB-MXMX-WA-200

Single-axis robot/Medium, X-axis, mid-support type/Actuator width: 120mm/200W Straight shape

ISPB-MXMX-WA-200

Single-axis robot/Medium, X-axis, mid-support type/Actuator width: 120mm/200W Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
	MXMX	WA	200			T2		
ISB: Standard specification ISPB: High precision specification		WA: Battery-less Absolute specification	200: 200W	30: 30mm 20: 20mm	800: 800mm 〜 2000: 2000mm (in 50 mm increments)	T2: SCON MSCON SSEL XSEL	N: None S: 3m M: 5m X□□: Spec.length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50 mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg) Rated acceleration	Payload (Note 1) Vertical (kg) Maximum acceleration	Rated thrust (N)
ISB[ISPB]-MXMX-WA-200-30-①-T2-②-③	Battery-less Absolute	200	30	800~2000	1~1800	0.4	Designed exclusively for horizontal use			30	Designed exclusively for horizontal use			113.9
ISB[ISPB]-MXMX-WA-200-20-①-T2-②-③			20		1~1200	0.4				45				170.9

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
-	-	-	High straightness, precision specification	ST	P13
-	-	-	Metal cable joint connector (standard feature)	EU	P12

Common Specifications

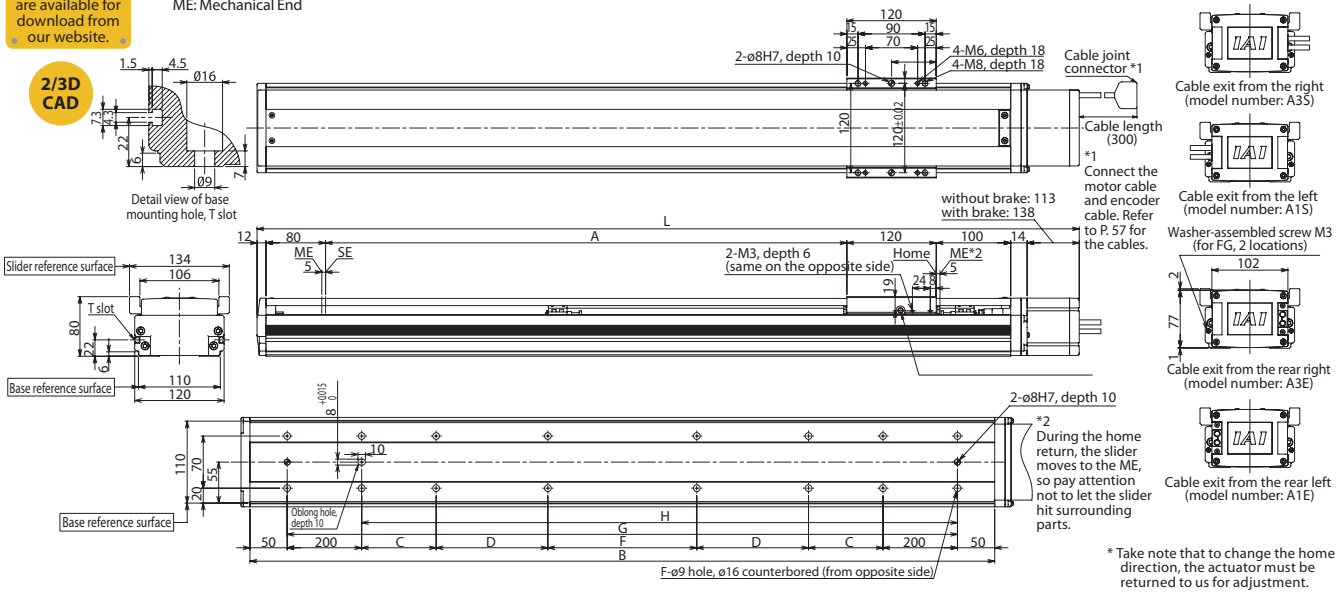
Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screwØ16mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 81.0N•m Mb: 116.0N•m Mc: 189.0N•m
Overhang load length	Ma direction: 600mm max. Mb, Mc directions: 600mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Diagram

CAD drawings are available for download from our website.

SE: Stroke End
ME: Mechanical End

2/3D CAD



* Take note that to change the home direction, the actuator must be returned to us for adjustment.

Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.6kg. *The max. speed (mm/s) varies depending on the stroke. *Please contact IAI for interim values of 50 mm stroke increments.

Stroke		800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
L	without brake	1239	1339	1439	1539	1639	1739	1839	1939	2039	2139	2239	2339	2439
	with brake	1264	1364	1464	1564	1664	1764	1864	1964	2064	2164	2264	2364	2464
A		800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
B		1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
C		200	200	200	250	300	350	400	450	500	550	200	200	200
D		0	0	0	0	0	0	0	0	0	0	400	450	500
E		200	300	400	400	400	400	400	400	400	400	400	400	400
F		12	12	12	12	12	12	12	12	12	12	16	16	16
G		1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
H		800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
Mass (kg)		16.5	17.8	19.1	20.3	21.6	22.9	24.1	25.4	26.7	28.0	29.2	30.5	31.8
Maximum speed (mm/s)	Lead 30	1800				1650	1500	1425	1200	1050	900	825	750	675
	Lead 20	1200				1100	1000	950	800	700	600	550	500	450

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

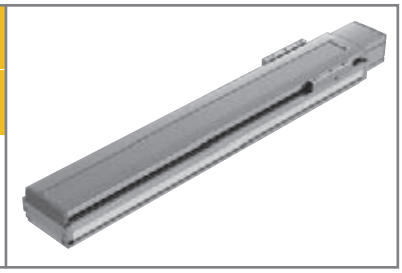
(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISB-LXM-WA-200

Single-axis robot/Large, X-axis, standard slider type/Actuator width: 150mm/200W Straight shape

ISPB-LXM-WA-200

Single-axis robot/Large, X-axis, standard slider type/Actuator width: 150mm/200W Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISB: Standard specification ISPB: High precision specification	LXM	WA: Battery-less Absolute specification	200: 200W	40 : 40mm 20 : 20mm 10 : 10mm	100: 100mm 〜 1300: 1300mm (in 50 mm increments)	T2: SCON MSCON SSEL XSEL	N : None S : 3m M: 5m X□□:Spec. length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg)** Rated acceleration	Payload (Note 1) Vertical (kg)** Maximum acceleration	Rated thrust (N)
ISB[ISPB]-LXM-WA-200-40- ① -T2- ② - ③	Battery-less Absolute	200	40	100~1300	1~2400	0.4	1.2	0.4	1.2	15	6	4	1.6	85.5
ISB[ISPB]-LXM-WA-200-20- ① -T2- ② - ③			20		1~1200	0.4	1.2	0.4	1	45	12	10	5	170.9
ISB[ISPB]-LXM-WA-200-10- ① -T2- ② - ③			10		1~600	0.4	0.7	0.4	0.6	90	40	20	14	341.8

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).
**If the guide with ball retention mechanism (RT) is used, the vertical payload decreases by 1.0kg. (Please also refer to P.9).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
Double slider	W	P56-1	High straightness, precision specification	ST	P13
-	-	-	Metal cable joint connector (standard feature)	EU	P12

Common Specifications

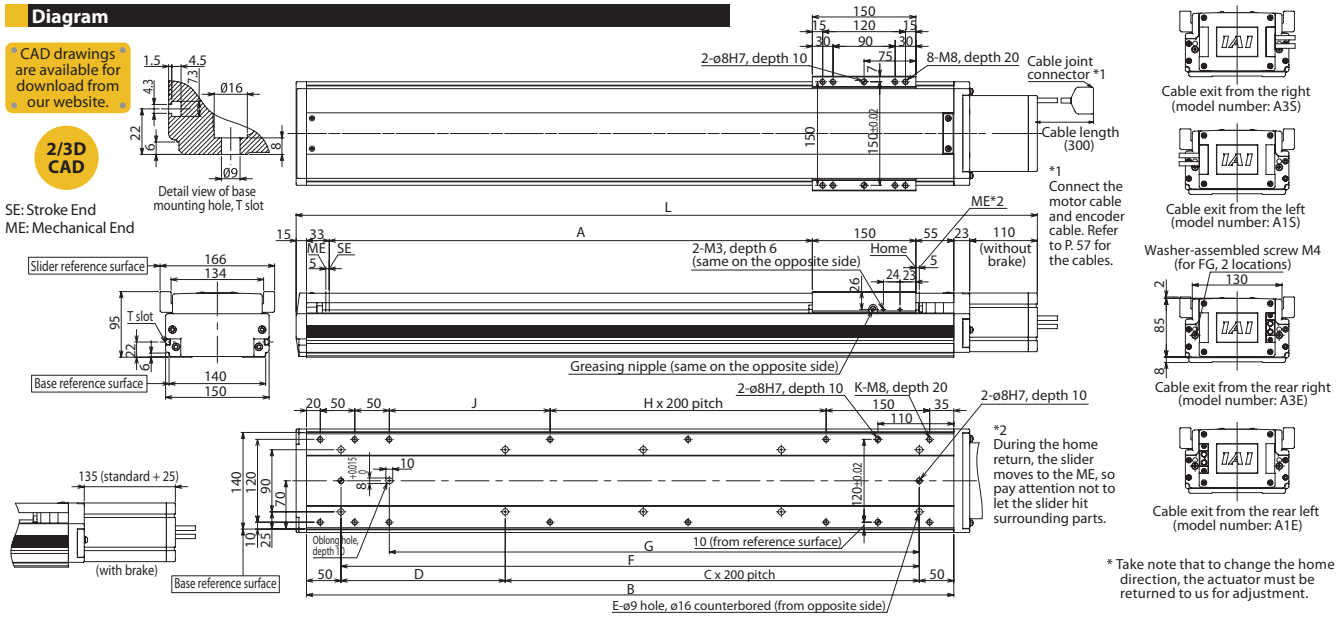
Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screwØ20mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 123.0N•m Mb: 176.0N•m Mc: 291.0N•m
Overhang load length	Ma direction: 750mm max. Mb, Mc directions: 750mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Diagram

CAD drawings are available for download from our website.

2/3D CAD

SE: Stroke End
ME: Mechanical End



* Take note that to change the home direction, the actuator must be returned to us for adjustment.

Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.6kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
L	without brake	486	536	586	636	686	736	786	836	886	936	986	1036	1086	1136	1186	1236	1286	1336	1386	1436	1486	1536	1586	1636	1686
	with brake	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461	1511	1561	1611	1661	1711
A		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
B		338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
C		0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
D		238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238
E		4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
F		238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
G		168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
H		0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
J		33	83	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233
K		10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
Mass (kg)		9.4	10.3	11.1	12.0	12.8	13.7	14.6	15.5	16.3	17.2	18.0	18.9	19.8	20.7	21.5	22.4	23.2	24.1	25.0	25.9	26.7	27.6	28.4	29.3	30.2
Maximum speed (mm/s)	Lead 40	2400															1840		1530		1290		1100		880	
	Lead 20	1200															920		765		645		550		440	
	Lead 10	600															460		380		320		270		220	

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

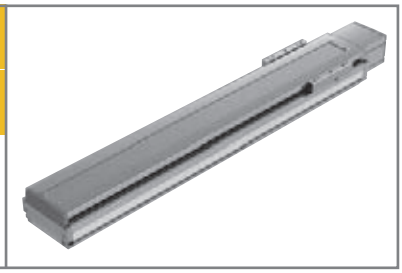
(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISB-LXM-WA-400

Single-axis robot/Large, X-axis, standard slider type/Actuator width: 150mm/400W Straight shape

ISPB-LXM-WA-400

Single-axis robot/Large, X-axis, standard slider type/Actuator width: 150mm/400W Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISB: Standard specification ISPB: High precision specification	LXM	WA: Battery-less Absolute specification	400: 400W	40 : 40mm 20 : 20mm 10 : 10mm	100: 100mm 〜 1300: 1300mm (in 50 mm increments)	T2: SCON SSEL XSEL	N : None S : 3m M : 5m X□□: Spec.length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg) Rated acceleration	Payload (Note 1) Vertical (kg) Maximum acceleration	Rated thrust (N)
ISB[ISPB]-MXM-WA-400-40-① -T2-② -③	Battery-less Absolute	400	40	100~1300	1~2400	0.4	1.2	0.4	1.2	40	15	10	4	169.6
ISB[ISPB]-MXM-WA-400-20-① -T2-② -③			20		1~1200	0.4	1.2	0.4	1	90	24	20	10	339.1
ISB[ISPB]-MXM-WA-400-10-① -T2-② -③			10		1~600	0.4	0.7	0.4	0.6	120	60	40	30	678.3

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
Double slider	W	P56-1	High straightness, precision specification	ST	P13
-	-	-	Metal cable joint connector (standard feature)	EU	P12

Common Specifications

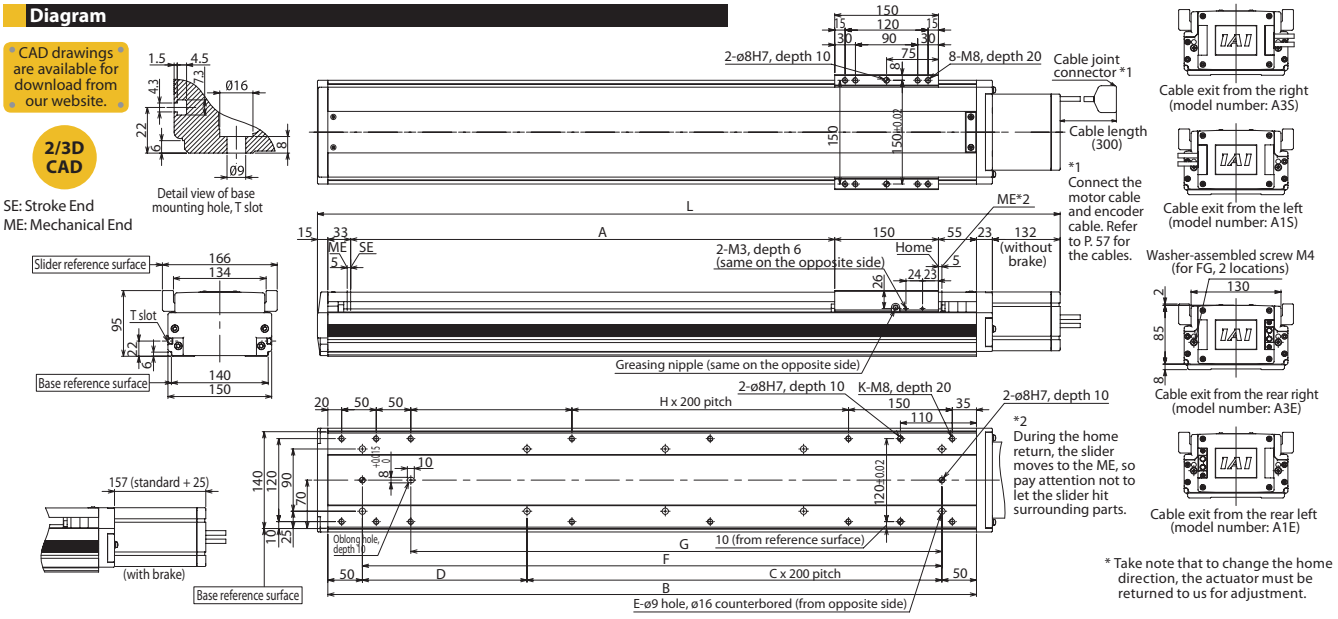
Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screwØ20mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 123.0N•m Mb: 176.0N•m Mc: 291.0N•m
Overhang load length	Ma direction: 750mm max. Mb, Mc directions: 750mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Diagram

CAD drawings are available for download from our website.

2/3D CAD

SE: Stroke End
ME: Mechanical End



* Take note that to change the home direction, the actuator must be returned to us for adjustment.

Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 06kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
L	without brake	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708
	with brake	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233	1283	1333	1383	1433	1483	1533	1583	1633	1683	1733
A		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
B		338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
C		0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
D		238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238
E		4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
F		238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
G		168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
H		0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
J		33	83	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233
K		10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
Mass (kg)		9.8	10.7	11.6	12.5	13.3	14.2	15.0	15.9	16.8	17.7	18.5	19.4	20.2	21.1	22.0	22.9	23.7	24.6	25.4	26.3	27.2	28.1	28.9	29.8	30.6
Maximum speed (mm/s)	Lead 40	2400															1840		1530		1290		1100		880	
	Lead 20	1200															920		765		645		550		440	
	Lead 10	600															460		380		320		270		220	

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
-	-	-	-		-
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

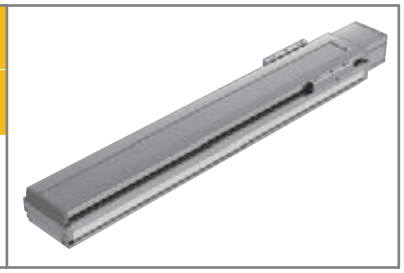
(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISB-LXL-WA-200

Single-axis robot/Large, X-axis, long slider type/Actuator width: 150mm/200W Straight shape

ISPB-LXL-WA-200

Single-axis robot/Large, X-axis, long slider type/Actuator width: 150mm/200W Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
—	LXL	WA	200	—	—	T2	—	—
ISB: Standard specification ISPB: High precision specification		WA: Battery-less Absolute specification	200: 200W	40 : 40mm 20 : 20mm 10 : 10mm	120: 120mm 〜 1270: 1270mm (in 50 mm increments)	T2: SCON MSCON SSEL XSEL	N : None S : 3m M: 5m X□□: Spec. length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg) Rated acceleration	Payload (Note 1) Vertical (kg) Maximum acceleration	Rated thrust (N)
ISB[ISPB]-LXL-WA-200-40- ① -T2- ② - ③	Battery-less Absolute	200	40	100~1270	1~2400	0.4	1.2	0.4	1.2	15	6	4	1.6	85.5
ISB[ISPB]-LXL-WA-200-20- ① -T2- ② - ③			20		1~1200	0.4	1.2	0.4	1	45	12	10	5	170.9
ISB[ISPB]-LXL-WA-200-10- ① -T2- ② - ③			10		1~600	0.4	0.7	0.4	0.6	90	40	20	14	341.8

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	-	-	-
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
Double slider	W	P56-1	High straightness, precision specification	ST	P13
-	-	-	Metal cable joint connector (standard feature)	EU	P12

Common Specifications

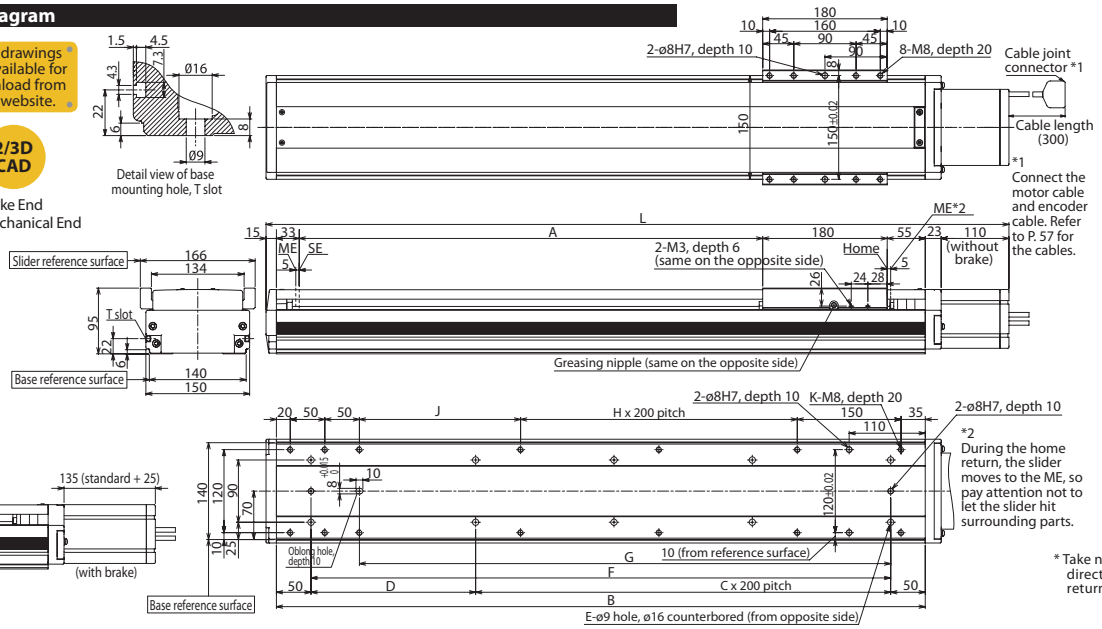
Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screwØ20mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 162.0N•m Mb: 231.0N•m Mc: 327.0N•m
Overhang load length	Ma direction: 900mm max. Mb, Mc directions: 900mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

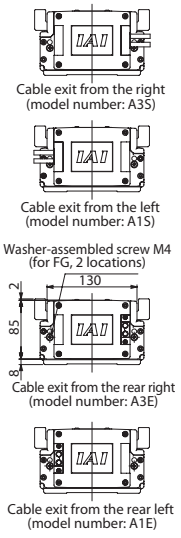
Diagram

CAD drawings are available for download from our website.

2/3D CAD

SE: Stroke End
ME: Mechanical End





* Take note that to change the home direction, the actuator must be returned to us for adjustment.

■ Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.6kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270
L	without brake	536	586	636	686	736	786	836	886	936	986	1036	1086	1136	1186	1236	1286	1336	1386	1436	1486	1536	1586	1636	1686
	with brake	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461	1511	1561	1611	1661	1711
A		120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270
B		388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
C		0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
D		288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238
E		4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
F		288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
G		218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
H		0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
J		83	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233
K		10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
Mass (kg)		9.8	10.7	11.5	12.4	13.2	14.1	15.0	15.9	16.7	17.6	18.4	19.3	20.2	21.1	21.9	22.8	23.6	24.5	25.4	26.3	27.1	28.0	28.8	29.7
Maximum speed (mm/s)	Lead 40	2400														1840		1530		1290		1100		880	
	Lead 20	1200														920		765		645		550		440	
	Lead 10	600														460		380		320		270		220	

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

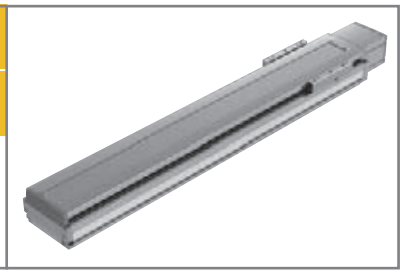
(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISB-LXL-WA-400

Single-axis robot/Large, X-axis, long slider type/Actuator width: 150mm/400W Straight shape

ISPB-LXL-WA-400

Single-axis robot/Large, X-axis, long slider type/Actuator width: 150mm/400W Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
—	LXL	WA	400	—	—	T2	—	—
		WA: Battery-less Absolute specification	400: 400W	40 : 40mm 20 : 20mm 10 : 10mm	120: 120mm ~ 1270: 1270mm (in 50 mm increments)	T2: SCON SSEL XSEL	N : None S : 3m M : 5m X□□: Spec.length	Please refer to the options table below.

ISB: Standard specification
ISPB: High precision specification

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm increments (mm)	Speed (mm/s)	Acceleration (Note 1)				Payload (Note 1)				Rated thrust (N)
						Horizontal (G)		Vertical (G)		Horizontal (kg)		Vertical (kg)		
						Rated	Maximum	Rated	Maximum	Rated acceleration	Maximum acceleration	Rated acceleration	Maximum acceleration	
ISB[ISPB]-LXL-WA-400-40-① -T2-②-③	Battery-less Absolute	400	40	100~1270	1~2400	0.4	1.2	0.4	1.2	40	15	10	4	169.6
ISB[ISPB]-LXL-WA-400-20-① -T2-②-③			20		1~1200	0.4	1.2	0.4	1	90	24	20	10	339.1
ISB[ISPB]-LXL-WA-400-10-① -T2-②-③			10		1~600	0.4	0.7	0.4	0.6	120	60	40	30	678.3

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	-	-	-
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
Double slider	W	P56-1	High straightness, precision specification	ST	P13
-	-	-	Metal cable joint connector (standard feature)	EU	P12

Common Specifications

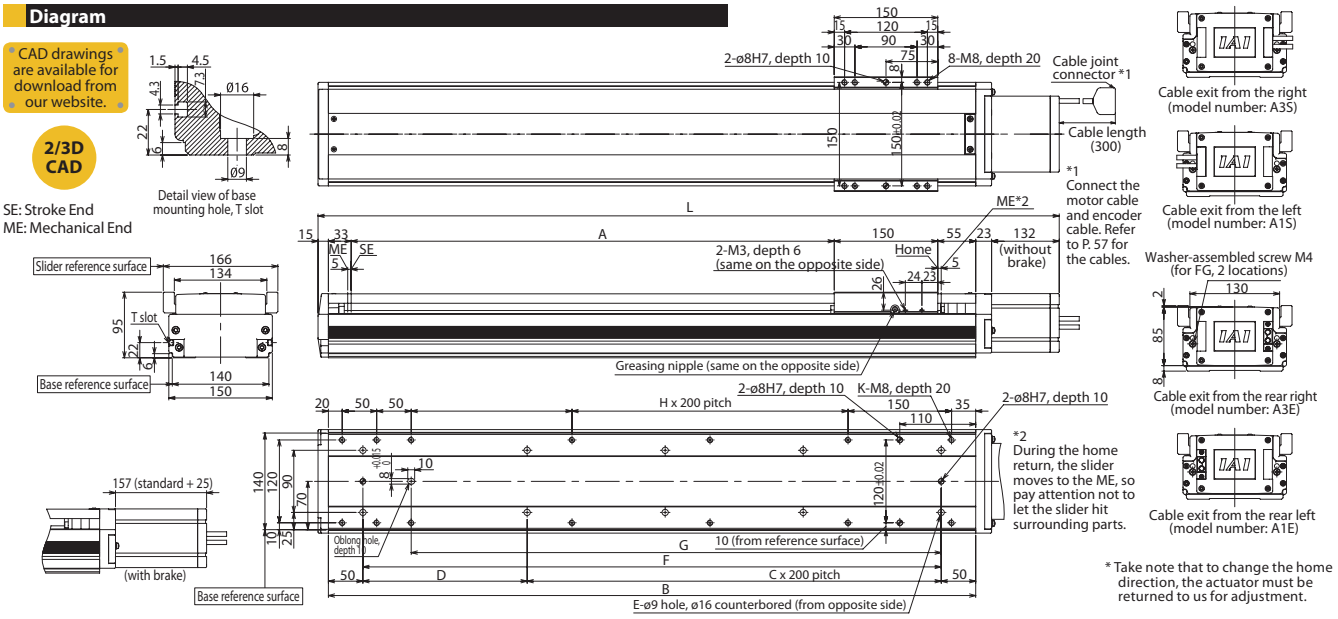
Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screwØ20mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 162.0N•m Mb: 231.0N•m Mc: 327.0N•m
Overhang load length	Ma direction: 900mm max. Mb, Mc directions: 900mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Diagram

CAD drawings are available for download from our website.

2/3D CAD

SE: Stroke End
ME: Mechanical End



■ Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.6kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270
L	without brake	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708
	with brake	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233	1283	1333	1383	1433	1483	1533	1583	1633	1683	1733
A		120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270
B		388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
C		0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
D		288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238
E		4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
F		288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
G		218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
H		0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
J		83	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233
K		10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
Mass (kg)		10.2	11.1	12.0	12.9	13.7	14.6	15.4	16.3	17.2	18.1	18.9	19.8	20.6	21.5	22.4	23.3	24.1	25.0	25.8	26.7	27.6	28.5	29.3	30.2
Maximum speed (mm/s)	Lead 40	2400														1840		1530		1290		1100		880	
	Lead 20	1200														920		765		645		550		440	
	Lead 10	600														460		380		320		270		220	

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
-	-	-	-		-
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

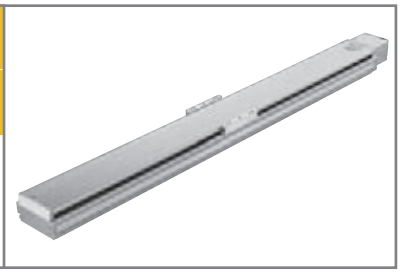
(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISB-LXMX-WA-200

Single-axis robot/Large, X-axis, mid-support type/Actuator width: 150mm/200W Straight shape

ISPB-LXMX-WA-200

Single-axis robot/Large, X-axis, mid-support type/Actuator width: 150mm/200W Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISB: Standard specification ISPB: High precision specification	LXMX	WA: Battery-less Absolute specification	200: 200W	20: 20mm	100: 100mm 〜 2500: 2500mm (in 50 mm increments)	T2: SCON MSCON SSEL XSEL	N: None S: 3m M: 5m X□□: Spec.length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50 mm increments (mm)	Speed (mm/s)	Acceleration (Note 1)				Payload (Note 1)				Rated thrust (N)
						Horizontal (G)		Vertical (G)		Horizontal (kg)		Vertical (kg)		
						Rated	Maximum	Rated	Maximum	Rated acceleration	Maximum acceleration	Rated acceleration	Maximum acceleration	
ISB[ISPB]-LXMX-WA-200-20-① -T2-②-③	Battery-less Absolute	200	20	1000~2500	1~1200	0.4		Designed exclusively for horizontal use		45		Designed exclusively for horizontal use		170.9

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
-	-	-	High straightness, precision specification	ST	P13
-	-	-	Metal cable joint connector (standard feature)	EU	P12

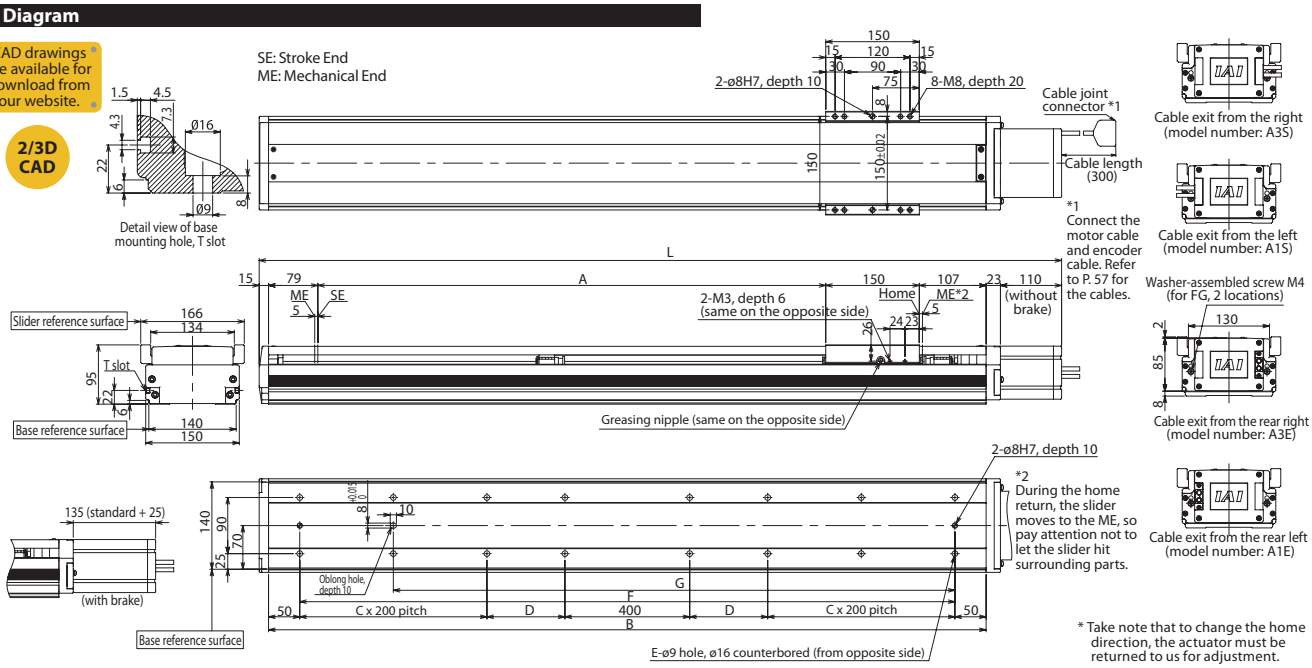
Common Specifications

Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screwø20mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 123.0N•m Mb: 176.0N•m Mc: 291.0N•m
Overhang load length	Ma direction: 750mm max. Mb, Mc directions: 750mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Diagram

CAD drawings are available for download from our website.

2/3D CAD



* Take note that to change the home direction, the actuator must be returned to us for adjustment.

■ Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.6kg. *The max. speed (mm/s) varies depending on the stroke. *Please contact IAI for interim values of 50 mm stroke increments.

Stroke		1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	without brake	1498	1598	1698	1798	1898	1998	2098	2198	2298	2398	2498	2598	2698	2798	2898	2998
	with brake	1523	1623	1723	1823	1923	2023	2123	2223	2323	2423	2523	2623	2723	2823	2923	3023
A		1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
B		1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
C		1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3
D		225	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575
E		12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
F		1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
G		1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
Mass (kg)		27.3	29.0	30.8	32.5	34.3	36.1	37.8	39.6	41.3	43.1	44.8	46.6	48.3	50.1	51.8	53.6
Maximum speed (mm/s) Lead 20		1200			1150	1000	950	830	740	650	590	540	490	440	410	370	340

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

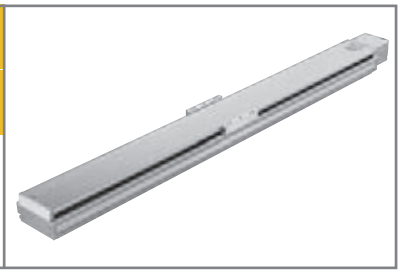
(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISB-LXMX-WA-400

Single-axis robot/Large, X-axis, mid-support type/Actuator width: 150mm/400W Straight shape

ISPB-LXMX-WA-400

Single-axis robot/Large, X-axis, mid-support type/Actuator width: 150mm/400W Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
—	LXMX	WA	400	—	—	T2	—	—
ISB: Standard specification ISPB: High precision specification		WA: Battery-less Absolute specification	400: 400W	40: 40mm 20: 20mm	100: 100mm 〜 2500: 2500mm (in 50 mm increments)	T2: SCON SSEL XSEL	N: None S: 3m M: 5m X□□: Spec. length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50 mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg) Rated acceleration	Payload (Note 1) Vertical (kg) Maximum acceleration	Rated thrust (N)
ISB[ISPB]-LXMX-WA-400-40- ① -T2- ② - ③	Battery-less Absolute	400	40	1000~2500	1~2400	0.4	Designed exclusively for horizontal use			40	Designed exclusively for horizontal use			169.6
ISB[ISPB]-LXMX-WA-400-20- ① -T2- ② - ③			20		1~1200	0.4				90				339.1

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
-	-	-	High straightness, precision specification	ST	P13
-	-	-	Metal cable joint connector (standard feature)	EU	P12

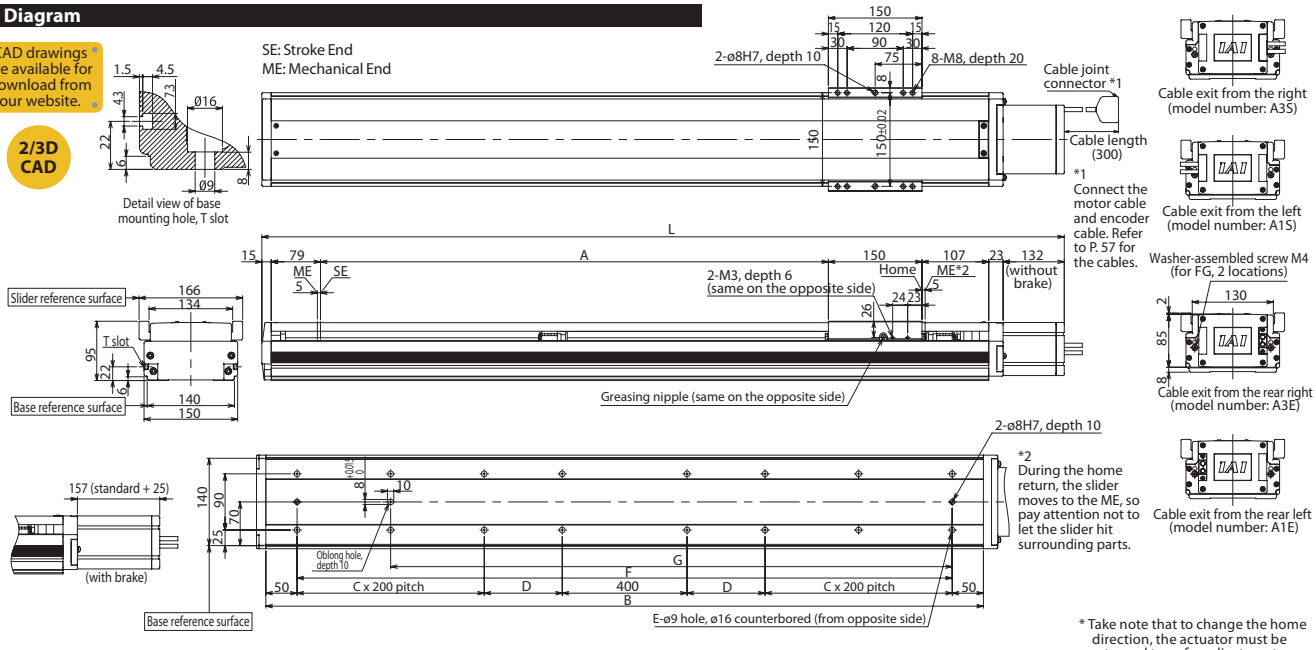
Common Specifications

Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screwØ20mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 123.0N•m Mb: 176.0N•m Mc: 291.0N•m
Overhang load length	Ma direction: 750mm max. Mb, Mc directions: 750mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Diagram

CAD drawings are available for download from our website.

2/3D CAD



* Take note that to change the home direction, the actuator must be returned to us for adjustment.

■ Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.6kg. *The max. speed (mm/s) varies depending on the stroke. *Please contact IAI for interim values of 50 mm stroke increments.

Stroke		1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	without brake	1520	1620	1720	1820	1920	2020	2120	2220	2320	2420	2520	2620	2720	2820	2920	3020
	with brake	1545	1645	1745	1845	1945	2045	2145	2245	2345	2445	2545	2645	2745	2845	2945	3045
A		1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
B		1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
C		1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3
D		225	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575
E		12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
F		1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
G		1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
Mass (kg)		27.7	29.5	31.3	33.0	34.8	36.5	38.3	40.0	41.8	43.5	45.3	47.0	48.8	50.6	52.3	54.1
Maximum speed (mm/s)	Lead 40	2400			2300	2000	1900	1660	1480	1300	1180	1080	980	880	820	740	680
	Lead 20	1200			1150	1000	950	830	740	650	590	540	490	440	410	370	340

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
-	-	-	-		-
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

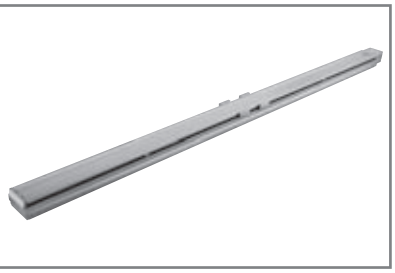
(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISB-LXUWX-WA-200

Single-axis robot/Large, X-axis, mid-support, double-slider type/ Actuator width: 150mm/200W Straight shape

ISPB-LXUWX-WA-200

Single-axis robot/Large, X-axis, mid-support, double-slider type/Actuator width: 150mm/200W Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISB: Standard specification ISPB: High precision specification	LXUWX	WA: Battery-less Absolute specification	200: 200W	20: 20mm	1000: 1000mm 〜 2500: 2500mm (in 50 mm increments)	T2: SCON MSCON SSEL XSEL	N: None S: 3m M: 5m X□□: Spec. length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50 mm increments (mm)	Speed (mm/s)	Acceleration (Note 1)				Payload (Note 1)				Rated thrust (N)
						Horizontal (G)		Vertical (G)		Horizontal (kg)		Vertical (kg)		
						Rated	Maximum	Rated	Maximum	Rated acceleration	Maximum acceleration	Rated acceleration	Maximum acceleration	
ISB[ISPB]-LXUWX-WA-200-20-①-T2-②-③	Battery-less Absolute	200	20	1000~2500	1~1200	0.4		Designed exclusively for horizontal use		45		Designed exclusively for horizontal use		170.1

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
-	-	-	High straightness, precision specification	ST	P13
-	-	-	Metal cable joint connector (standard feature)	EU	P12

Common Specifications

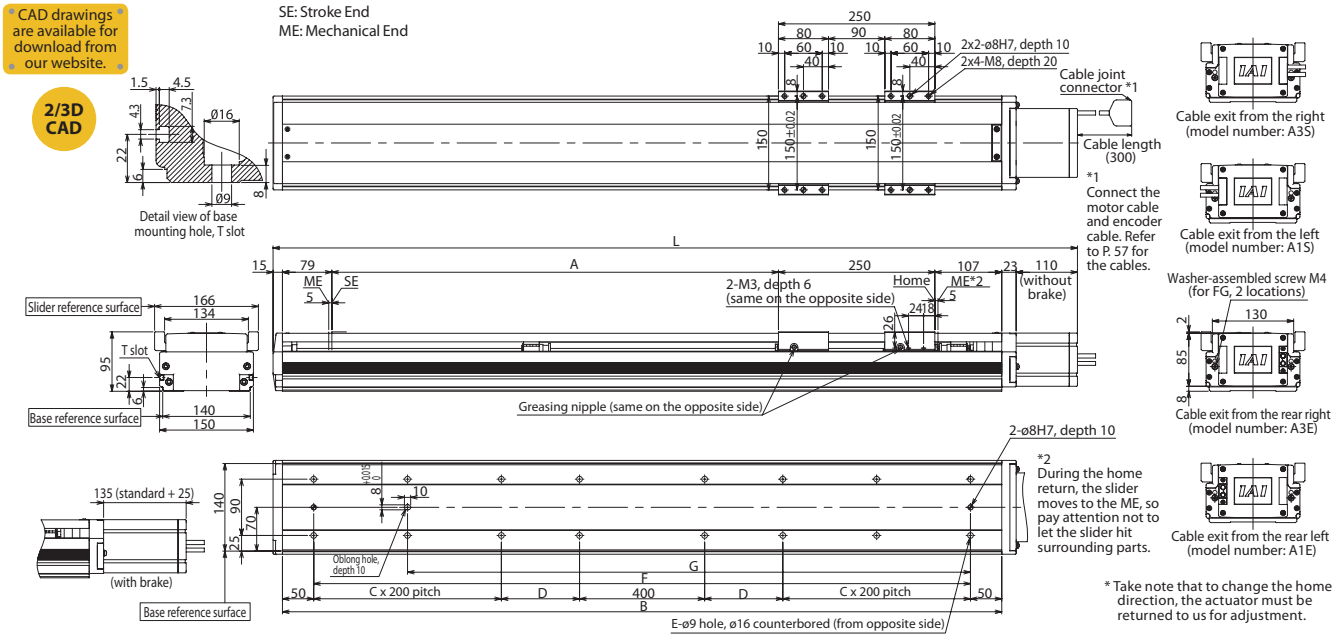
Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screwØ20mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 299.0N•m Mb: 427.0N•m Mc: 292.0N•m
Overhang load length	Ma direction: 1250mm max. Mb, Mc directions: 1250mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Diagram

CAD drawings are available for download from our website.

2/3D CAD

SE: Stroke End
ME: Mechanical End



* Take note that to change the home direction, the actuator must be returned to us for adjustment.

■ Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.6kg. *The max. speed (mm/s) varies depending on the stroke. *Please contact IAI for interim values of 50 mm stroke increments.

Stroke		1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	without brake	1598	1698	1798	1898	1998	2098	2198	2298	2398	2498	2598	2698	2798	2898	2998	3098
	with brake	1623	1723	1823	1923	2023	2123	2223	2323	2423	2523	2623	2723	2823	2923	3023	3123
A		1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
B		1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
C		1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
D		275	325	375	425	475	525	575	425	475	525	575	425	475	525	575	625
E		12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
F		1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
G		1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
Mass (kg)		30.4	32.1	33.9	35.6	37.4	39.1	40.9	42.6	44.4	46.1	47.9	49.7	51.4	53.2	54.9	56.7
Maximum speed (mm/s) Lead 20		1200			1150	1000	950	830	740	650	590	540	490	440	410	370	340

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

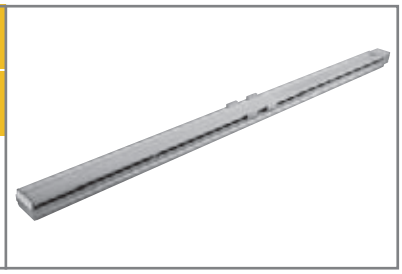
ISB-LXUWX-WA-400

Single-axis robot/Large, X-axis, mid-support, double-slider type/
Actuator width: 150mm/400W Straight shape

ISPB-LXUWX-WA-400

Single-axis robot/Large, X-axis, mid-support, double-slider type/Actuator width: 150mm/400W Straight shape

High precision specification



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISB: Standard specification ISPB: High precision specification	LXUWX	WA: Battery-less Absolute specification	400: 400W	40: 40mm 20: 20mm	1000: 1000mm ⌇ 2500: 2500mm (in 50 mm increments)	T2: SCON SSEL XSEL	N: None S: 3m M: 5m X□□: Spec. length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50 mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G)	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg) Rated acceleration	Payload (Note 1) Vertical (kg) Maximum acceleration	Rated thrust (N)
ISB[ISPB]-LXUWX-WA-400-40- ① -T2- ② -③	Battery-less Absolute	400	40	1000~2500	1~2400	0.4	Designed exclusively for horizontal use		40		Designed exclusively for horizontal use		169.6
ISB[ISPB]-LXUWX-WA-400-20- ① -T2- ② -③			20		1~1200	0.4			90				339.1

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
-	-	-	High straightness, precision specification	ST	P13
-	-	-	Metal cable joint connector (standard feature)	EU	P12

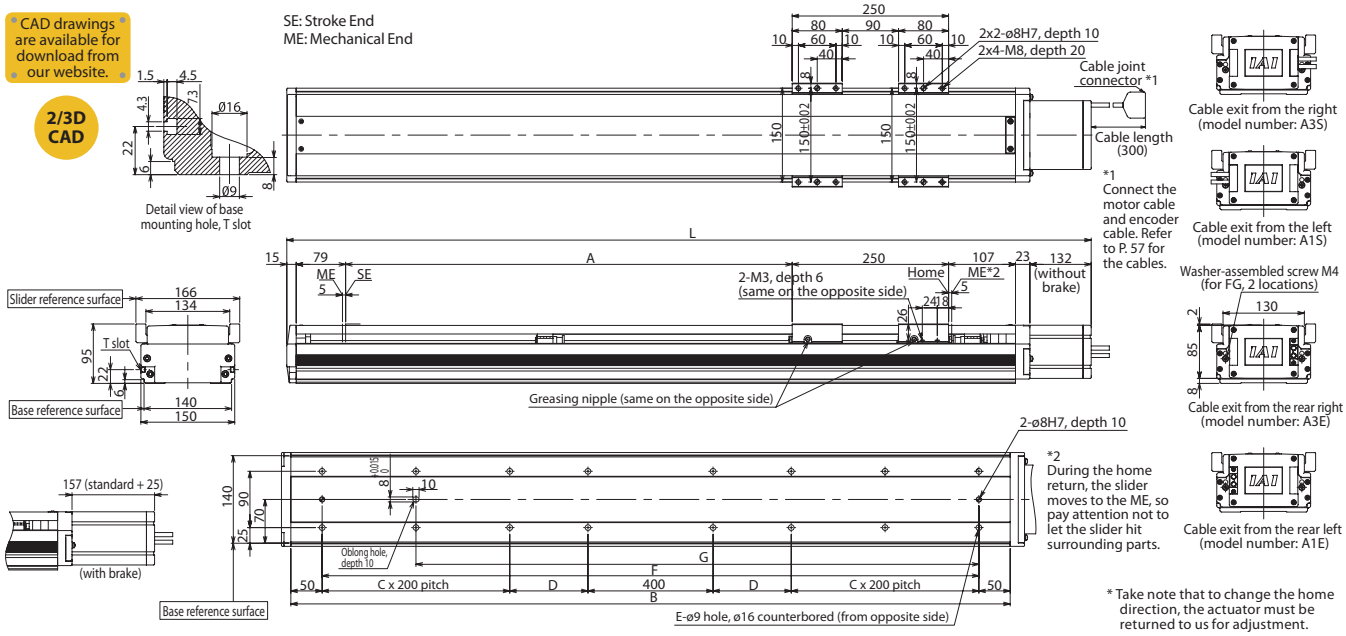
Common Specifications

Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screwØ20mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 299.0N•m Mb: 427.0N•m Mc: 292.0N•m
Overhang load length	Ma direction: 1250mm max. Mb, Mc directions: 1250mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Diagram

CAD drawings are available for download from our website.

2/3D CAD



* Take note that to change the home direction, the actuator must be returned to us for adjustment.

Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.6kg. *The max. speed (mm/s) varies depending on the stroke. *Please contact IAI for interim values of 50 mm stroke increments.

Stroke		1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	without brake	1620	1720	1820	1920	2020	2120	2220	2320	2420	2520	2620	2720	2820	2920	3020	3120
	with brake	1645	1745	1845	1945	2045	2145	2245	2345	2445	2545	2645	2745	2845	2945	3045	3145
A		1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
B		1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
C		1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
D		275	325	375	425	475	525	575	425	475	525	575	425	475	525	575	625
E		12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
F		1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
G		1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
Mass (kg)		30.8	32.6	34.3	36.1	37.8	39.6	41.4	43.1	44.9	46.6	48.4	50.1	51.9	53.6	55.4	57.1
Maximum speed (mm/s)	Lead 40	2400			2300	2000	1900	1660	1480	1300	1180	1080	980	880	820	740	680
	Lead 20	1200			1150	1000	950	830	740	650	590	540	490	440	410	370	340

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
-	-	-	-		-
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPB series. Other specification values apply commonly to the ISB and ISPB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISDB-S-WA
Single-axis robot/Small, dustproof type/Actuator width: 90mm/60W
Straight shape

ISPDB-S-WA
Single-axis robot/Small, dustproof type/Actuator width: 90mm/60W
Straight shape **High precision specification**

Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
—	S	WA	60	—	—	T2	—	—
ISDB: Standard specification ISPDB: High precision specification		WA: Battery-less Absolute specification	60: 60W	16: 16mm 8: 8mm 4: 4mm	100: 100mm 〜 800: 800mm (in 50mm increments)	T2: SCON MSCON SSEL XSEL	N: None S: 3m M: 5m X□□: Spec. length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm increments (mm)	Speed (mm/s)	Acceleration (Note 1)				Payload (Note 1)				Rated thrust (N)
						Horizontal (G)		Vertical (G)		Horizontal (kg)		Vertical (kg)**		
						Rated	Maximum	Rated	Maximum	Rated acceleration	Maximum acceleration	Rated acceleration	Maximum acceleration	
ISDB[ISPDB]-S-WA-60-16-①-T2-②-③	Battery-less Absolute	60	16	100~800	1~960	0.4	1.0	0.4	0.8	13	4.5	3	2	53.1
ISDB[ISPDB]-S-WA-60-8-①-T2-②-③			8		1~480	0.4	0.7	0.4	0.6	27	12	6	5	106.1
ISDB[ISPDB]-S-WA-60-4-①-T2-②-③			4		1~240	0.2	0.5	0.2	0.4	55	30	14	12	212.3

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).
**If the guide with ball retention mechanism (RT) is used, the vertical payload decreases by 0.5kg. (Please also refer to P.9).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
Double slider	W	P56-1	High straightness, precision specification	ST	P13
Slider roller specification	SR	P56-1	Metal cable joint connector (standard feature)	EU	P12

Common Specifications

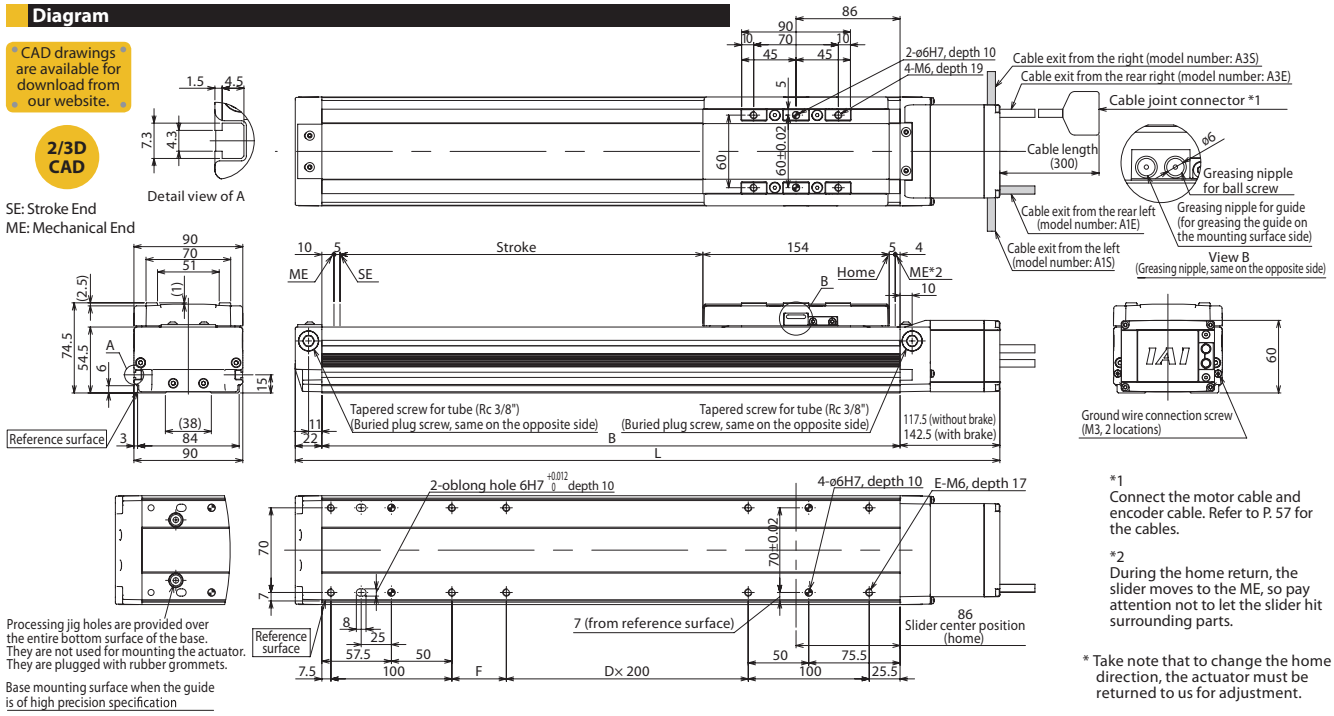
Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screw ø12mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 32.9N•m Mb: 47.0N•m Mc: 76.8N•m
Overhang load length	Ma direction: 450mm max. Mb, Mc directions: 450mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Protection structure	IP30
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Diagram

CAD drawings are available for download from our website.

2/3D CAD

SE: Stroke End
ME: Mechanical End



Processing jig holes are provided over the entire bottom surface of the base. They are not used for mounting the actuator. They are plugged with rubber grommets.

Base mounting surface when the guide is of high precision specification

*1
Connect the motor cable and encoder cable. Refer to P. 57 for the cables.

*2
During the home return, the slider moves to the ME, so pay attention not to let the slider hit surrounding parts.

* Take note that to change the home direction, the actuator must be returned to us for adjustment.

■ Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.2kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	without brake	417.5	467.5	517.5	567.5	617.5	667.5	717.5	767.5	817.5	867.5	917.5	967.5	1017.5	1067.5	1117.5
	with brake	442.5	492.5	542.5	592.5	642.5	692.5	742.5	792.5	842.5	892.5	942.5	992.5	1042.5	1092.5	1142.5
B		278	328	378	428	478	528	578	628	678	728	778	828	878	928	978
D		0	0	0	0	1	1	1	1	2	2	2	2	3	3	3
E		8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
F		45	95	145	195	45	95	145	195	45	95	145	195	45	95	145
Mass (kg)		4.1	4.4	4.8	5.1	5.5	5.9	6.2	6.6	7.0	7.3	7.7	8.1	8.4	8.8	9.1
Maximum speed (mm/s)	Lead 16	960									920	795	690	610	540	480
	Lead 8	480									460	400	345	305	270	240
	Lead 4	240									230	200	170	150	135	120

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

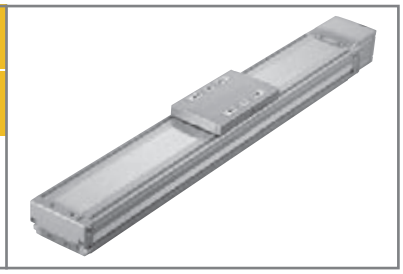
(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPDB series. Other specification values apply commonly to the ISDB and ISPDB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISDB-M-WA-100

Single-axis robot/Medium, dustproof type/Actuator width: 120mm/100W Straight shape

ISPDB-M-WA-100

Single-axis robot/Medium, dustproof type/Actuator width: 120mm/100W Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
—	M	WA	100	—	—	T2	—	—

- Series — ISDB: Standard specification; ISPDB: High precision specification
- Type — M
- Encoder type — WA: Battery-less Absolute specification
- Motor type — 100: 100W
- Lead — 30: 30mm; 20: 20mm; 10: 10mm; 5: 5mm
- Stroke — 100: 100mm ~ 1100: 1100mm (in 50mm increments)
- Applicable controller — T2: SCON, MSCON, SSEL, XSEL
- Cable length — N: None; S: 3m; M: 5m; X□□: Spec. length
- Options — Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg)** Rated acceleration	Payload (Note 1) Vertical (kg)** Maximum acceleration	Rated thrust (N)
ISDB[ISPDB]-M-WA-100-30-①-T2-②-③	Battery-less Absolute	100	30	100~1100	1~1800	0.4	1.0	0.4	1.0	15	4	2	1.2	56.6
ISDB[ISPDB]-M-WA-100-20-①-T2-②-③			20		1~1200	0.4	1.0	0.4	1.0	23	8	4	2.5	84.9
ISDB[ISPDB]-M-WA-100-10-①-T2-②-③			10		1~600	0.4	0.7	0.4	0.6	45	20	10	7	169.8
ISDB[ISPDB]-M-WA-100-5-①-T2-②-③			5		1~300	0.2	0.5	0.2	0.4	85	45	20	15	339.7

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).
**If the guide with ball retention mechanism (RT) is used, the vertical payload decreases by 0.5kg. (Please also refer to P.9).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
Double slider	W	P56-1	High straightness, precision specification	ST	P13
Slider roller specification	SR	P56-1	Metal cable joint connector (standard feature)	EU	P12

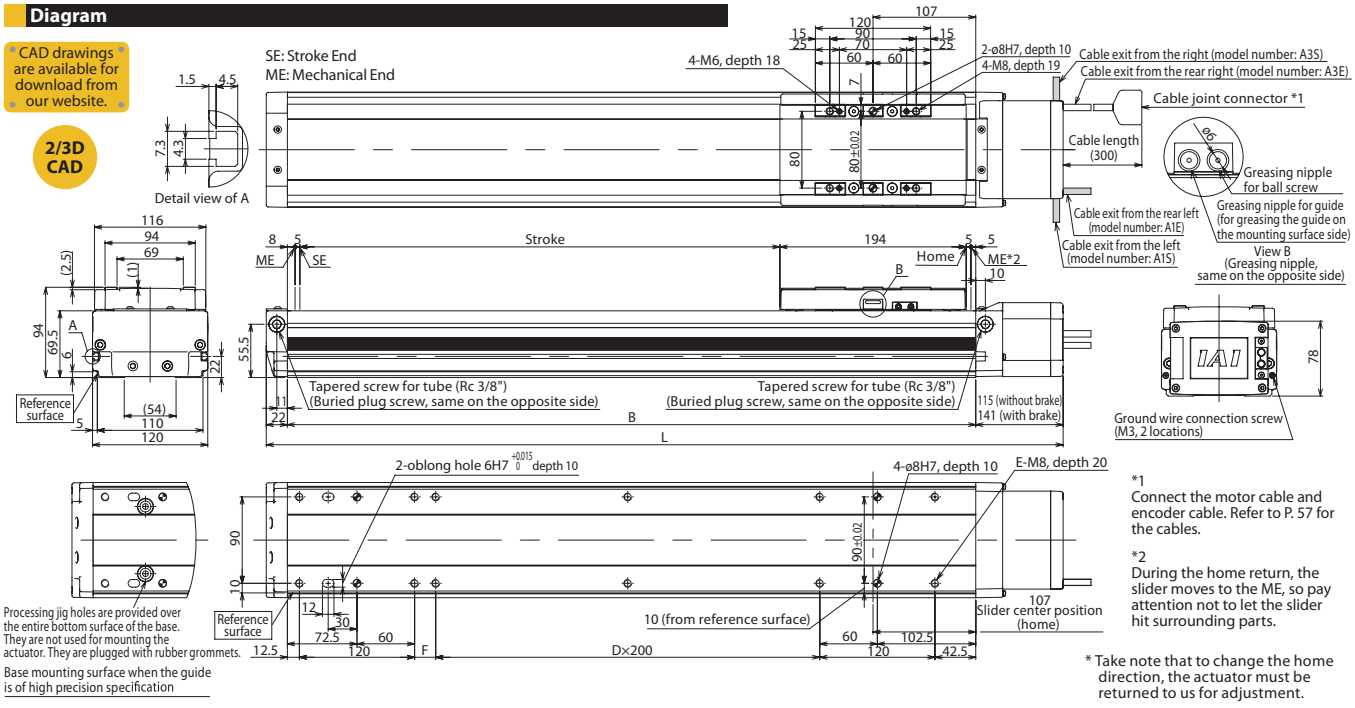
Common Specifications

Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screw ø16mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 81.0N•m Mb: 116.0N•m Mc: 189.0N•m
Overhang load length	Ma direction: 600mm max. Mb, Mc directions: 600mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Protection structure	IP30
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Diagram

CAD drawings are available for download from our website.

2/3D CAD



Processing jig holes are provided over the entire bottom surface of the base. They are not used for mounting the actuator. They are plugged with rubber grommets.

Base mounting surface when the guide is of high precision specification

*1 Connect the motor cable and encoder cable. Refer to P. 57 for the cables.

*2 During the home return, the slider moves to the ME, so pay attention not to let the slider hit surrounding parts.

* Take note that to change the home direction, the actuator must be returned to us for adjustment.

Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.3kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L	without brake	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304	1354	1404	1454
	with brake	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330	1380	1430	1480
B		317	367	417	467	517	567	617	667	717	767	817	867	917	967	1017	1067	1117	1167	1217	1267	1317
D		0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
E		8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
F		22	72	122	172	22	72	122	172	22	72	122	172	22	72	122	172	22	72	122	172	22
Mass (kg)		7.5	8.1	8.8	9.4	10.0	10.7	11.3	11.9	12.6	13.2	13.8	14.5	15.1	15.7	16.4	17.0	17.6	18.3	18.9	19.5	20.2
Maximum speed (mm/s)	Lead 30	1800											1630	1440	1280	1150	1035	935	850	780	715	660
	Lead 20	1200											1085	960	855	765	690	625	570	520	475	440
	Lead 10	600											545	480	430	380	345	310	285	260	240	220
	Lead 5	300											270	240	215	190	170	155	140	130	120	110

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPDB series. Other specification values apply commonly to the ISDB and ISPDB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

ISDB-M-WA-200
Single-axis robot/Medium, dustproof type/Actuator width: 120mm/200W
Straight shape

ISPDB-M-WA-200
Single-axis robot/Medium, dustproof type/Actuator width: 120mm/200W
Straight shape
High precision specification

Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISDB: Standard specification ISPDB: High precision specification	M	WA: Battery-less Absolute specification	200: 200W	30: 30mm 20: 20mm 10: 10mm 5: 5mm	100: 100mm ~ 1100: 1100mm (in 50mm increments)	T2: SCON MSCON SSEL XSEL	N: None S: 3m M: 5m X□□: Spec. length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg) Rated acceleration	Payload (Note 1) Vertical (kg) Maximum acceleration	Rated thrust (N)
ISDB[ISPDB]-M-WA-200-30-①-T2-②-③	Battery-less Absolute	200	30	100~1100	1~1800	0.4	1.0	0.4	1.0	30	12	6	3	113.9
ISDB[ISPDB]-M-WA-200-20-①-T2-②-③			20		1~1200	0.4	1.0	0.4	1.0	45	16	10	5	170.9
ISDB[ISPDB]-M-WA-200-10-①-T2-②-③			10		1~600	0.4	0.7	0.4	0.6	90	40	20	15	341.8
ISDB[ISPDB]-M-WA-200-5-①-T2-②-③			5		1~300	0.2	0.5	0.2	0.4	110	80	40	30	683.6

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
Double slider	W	P56-1	High straightness, precision specification	ST	P13
Slider roller specification	SR	P56-1	Metal cable joint connector (standard feature)	EU	P12

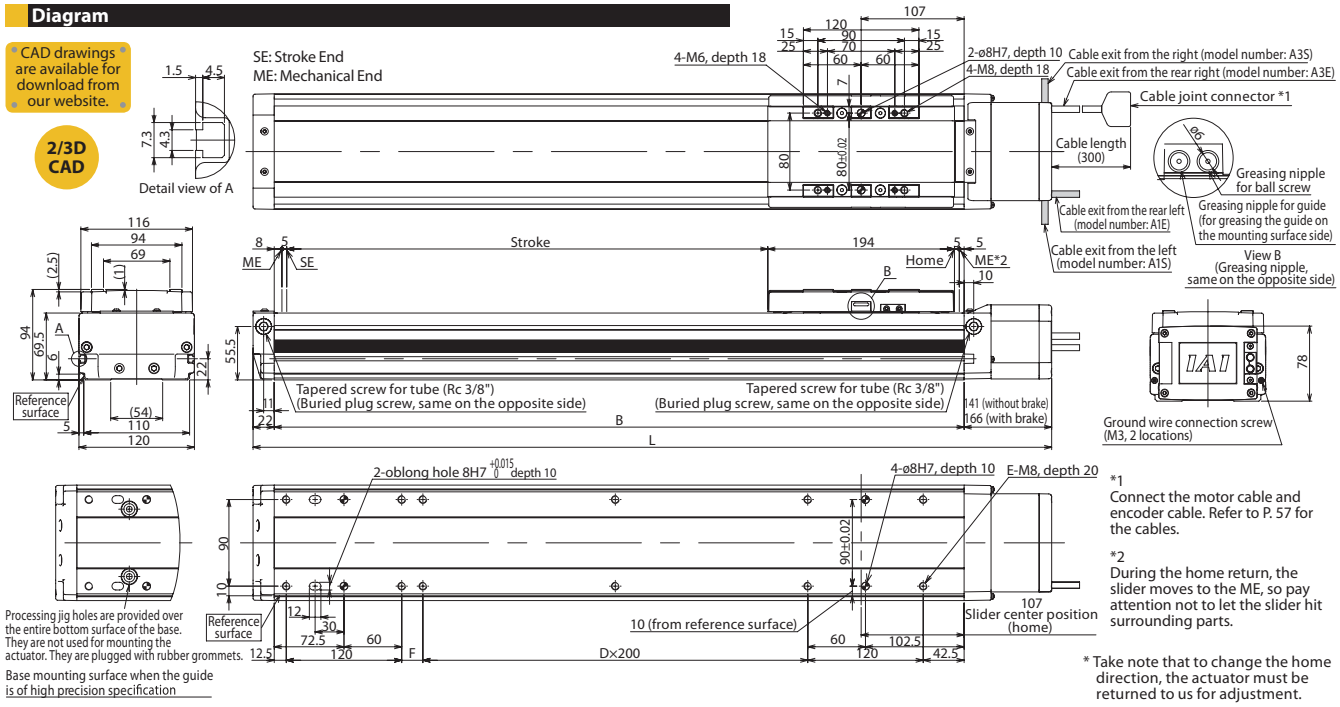
Common Specifications

Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screw ø16mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 81.0N•m Mb: 116.0N•m Mc: 189.0N•m
Overhang load length	Ma direction: 600mm max. Mb, Mc directions: 600mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Protection structure	IP30
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Diagram

CAD drawings are available for download from our website.

2/3D CAD



*1
Connect the motor cable and encoder cable. Refer to P. 57 for the cables.

*2
During the home return, the slider moves to the ME, so pay attention not to let the slider hit surrounding parts.

* Take note that to change the home direction, the actuator must be returned to us for adjustment.

Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.4kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L	without brake	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330	1380	1430	1480
	with brake	505	555	605	655	705	755	805	855	905	955	1005	1055	1105	1155	1205	1255	1305	1355	1405	1455	1505
B		317	367	417	467	517	567	617	667	717	767	817	867	917	967	1017	1067	1117	1167	1217	1267	1317
D		0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
E		8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
F		22	72	122	172	22	72	122	172	22	72	122	172	22	72	122	172	22	72	122	172	22
Mass (kg)		7.9	8.5	9.2	9.8	10.4	11.1	11.7	12.3	13.0	13.6	14.2	14.9	15.5	16.1	16.8	17.4	18.0	18.7	19.3	19.9	20.6
Maximum speed (mm/s)	Lead 30	1800											1630	1440	1280	1150	1035	935	850	780	715	660
	Lead 20	1200											1085	960	855	765	690	625	570	520	475	440
	Lead 10	600											545	480	430	380	345	310	285	260	240	220
	Lead 5	300											270	240	215	190	170	155	140	130	120	110

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

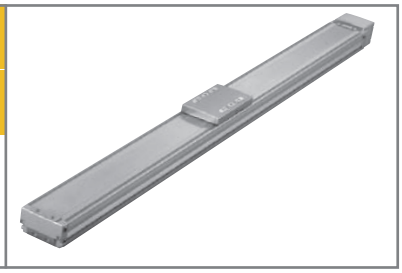
(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPDB series. Other specification values apply commonly to the ISDB and ISPDB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISDB-MX-WA-200

Single-axis robot/Medium, dustproof, mid-support type/Actuator
width: 120mm/200W Straight shape

ISPDB-MX-WA-200

Single-axis robot/Medium, dustproof, mid-support type/Actuator
width: 120mm/200W Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISDB: Standard specification ISPDB: High precision specification	MX	WA: Battery-less Absolute specification	200: 200W	30:30mm 20:20mm	800: 800mm ~ 1600: 1600mm (in 50 mm increments)	T2: SCON MSCON SSEL XSEL	N : None S : 3m M: 5m X□□: Spec. length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50 mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G)	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg) Rated acceleration	Payload (Note 1) Vertical (kg) Maximum acceleration	Rated thrust (N)
ISDB[ISPDB]-MX-WA-200-30-①-T2-②-③	Battery-less Absolute	200	30	800~1600	1~1800	0.4	Designed exclusively for horizontal use		30		Designed exclusively for horizontal use		113.9
ISDB[ISPDB]-MX-WA-200-20-①-T2-②-③			20		1~1200	0.4			45				170.9

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
-	-	-	High straightness, precision specification	ST	P13
-	-	-	Metal cable joint connector (standard feature)	EU	P12

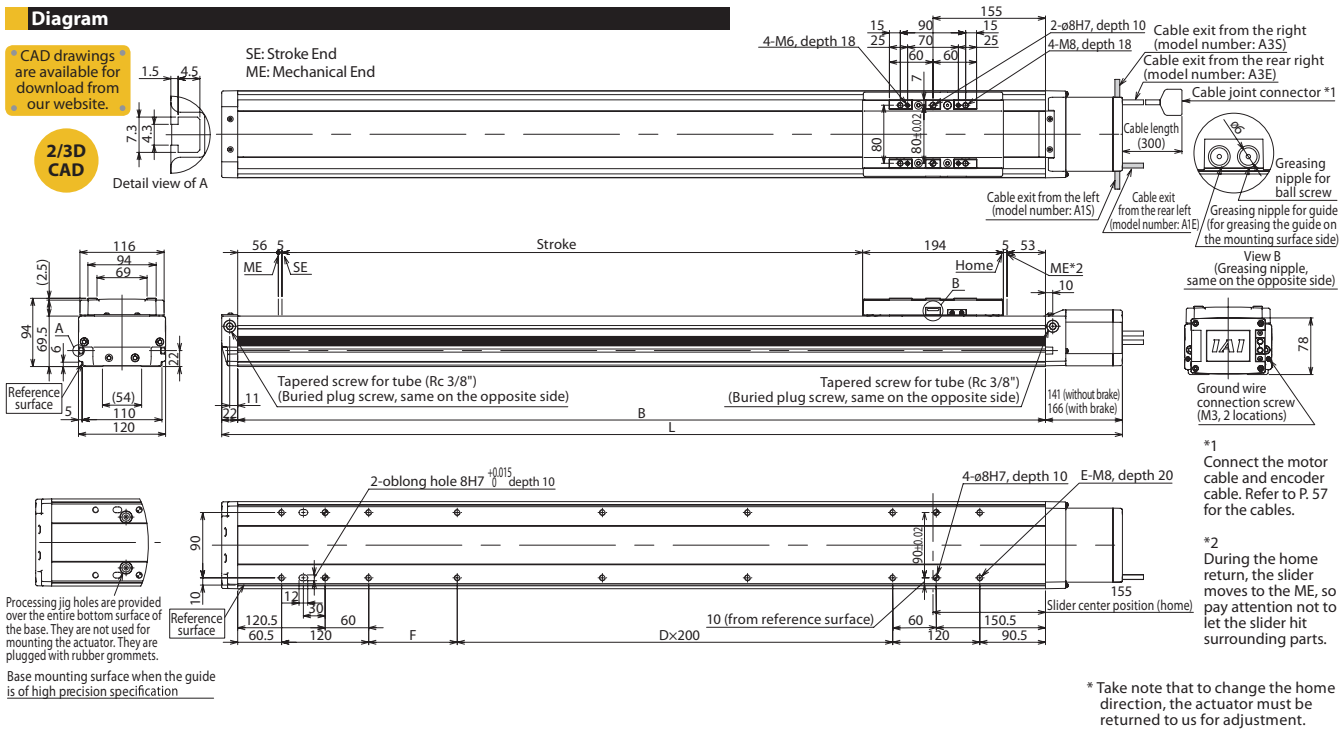
Common Specifications

Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screw ø16mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 81.0N•m Mb: 116.0N•m Mc: 189.0N•m
Overhang load length	Ma direction: 600mm max. Mb, Mc directions: 600mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Protection structure	IP30
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Diagram

CAD drawings are available for download from our website.

2/3D CAD



*1
Connect the motor cable and encoder cable. Refer to P. 57 for the cables.

*2
During the home return, the slider moves to the ME, so pay attention not to let the slider hit surrounding parts.

* Take note that to change the home direction, the actuator must be returned to us for adjustment.

Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.5kg. *The max. speed (mm/s) varies depending on the stroke. *Please contact IAI for interim values of 50 mm stroke increments.

Stroke		800	900	1000	1100	1200	1300	1400	1500	1600
L	without brake	1276	1376	1476	1576	1676	1776	1876	1976	2076
	with brake	1301	1401	1501	1601	1701	1801	1901	2001	2101
B		1113	1213	1313	1413	1513	1613	1713	1813	1913
D		3	3	4	4	5	5	6	6	7
E		14	14	16	16	18	18	20	20	22
F		122	222	122	222	122	222	122	222	122
Mass (kg)		18.3	19.6	20.9	22.2	23.4	24.7	26.0	27.3	28.6
Maximum speed (mm/s)	Lead 30	1800				1650	1500	1425	1200	1050
	Lead 20	1200				1100	1000	950	800	700

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

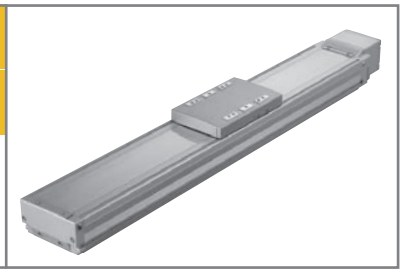
(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPDB series. Other specification values apply commonly to the ISDB and ISPDB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISDB-L-WA-200

Single-axis robot/Large, dustproof type/Actuator width: 150mm/200W
Straight shape

ISPDB-L-WA-200

Single-axis robot/Large, dustproof type/Actuator width: 150mm/200W
Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISDB: Standard specification ISPDB: High precision specification	L	WA: Battery-less Absolute specification	200: 200W	40:40mm 20:20mm 10:10mm	100: 100mm ~ 1300: 1300mm (in 50mm increments)	T2: SCON MSCON SSEL XSEL	T N: None S : 3m M: 5m X□□: Spec. length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg)** Rated acceleration	Payload (Note 1) Vertical (kg)** Maximum acceleration	Rated thrust (N)
ISDB[ISPDB]-L-WA-200-40-①-T2-②-③	Battery-less Absolute	200	40	100~1300	1~1800	0.4	1.0	0.4	1.0	15	7	2.5	2	85.5
ISDB[ISPDB]-L-WA-200-20-①-T2-②-③			20		1~1200	0.4	1.0	0.4	1.0	45	15	9	5	170.9
ISDB[ISPDB]-L-WA-200-10-①-T2-②-③			10		1~600	0.4	0.7	0.4	0.6	90	40	20	14	341.8

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).
**If the guide with ball retention mechanism (RT) is used, the vertical payload decreases by 1.0kg. (Please also refer to P.9).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
Double slider	W	P56-1	High straightness, precision specification	ST	P13
Slider roller specification	SR	P56-1	Metal cable joint connector (standard feature)	EU	P12

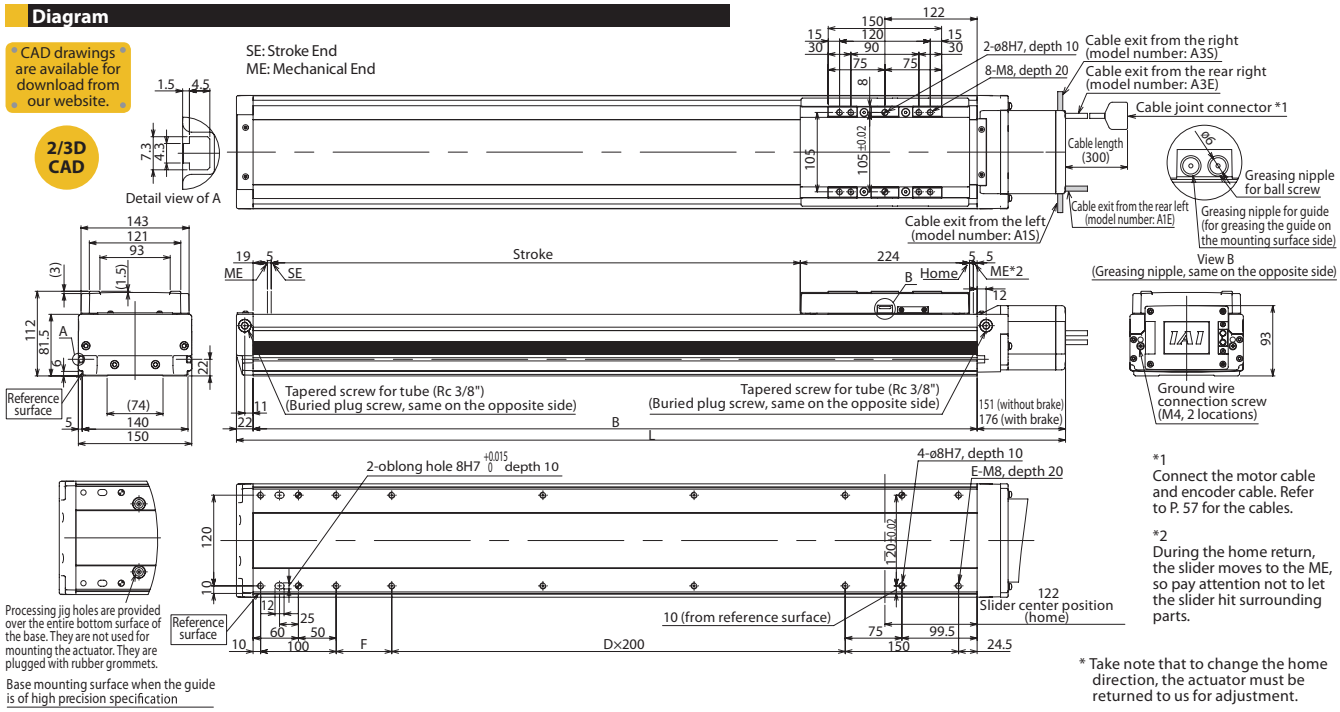
Common Specifications

Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screw ø20mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 123.0N•m Mb: 176.0N•m Mc: 291.0N•m
Overhang load length	Ma direction: 750mm max. Mb, Mc directions: 750mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Protection structure	IP30
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Diagram

CAD drawings are available for download from our website.

2/3D CAD



*1
Connect the motor cable and encoder cable. Refer to P. 57 for the cables.

*2
During the home return, the slider moves to the ME, so pay attention not to let the slider hit surrounding parts.

* Take note that to change the home direction, the actuator must be returned to us for adjustment.

■ Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.5kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
L	without brake	531	581	631	681	731	781	831	881	931	981	1031	1081	1131	1181	1231	1281	1331	1381	1431	1481	1531	1581	1631	1681	1731
	with brake	556	606	656	706	756	806	856	906	956	1006	1056	1106	1156	1206	1256	1306	1356	1406	1456	1506	1556	1606	1656	1706	1756
B		358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558
D		0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6
E		8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
F		73.5	123.5	173.5	23.5	73.5	123.5	173.5	23.5	73.5	123.5	173.5	23.5	73.5	123.5	173.5	23.5	73.5	123.5	173.5	23.5	73.5	123.5	173.5	23.5	73.5
Mass (kg)		11.8	12.7	13.6	14.4	15.3	16.2	17.0	17.9	18.8	19.6	20.5	21.4	22.3	23.1	24.0	24.9	25.7	26.6	27.5	28.3	29.2	30.1	31.0	31.8	32.7
Maximum speed (mm/s)	Lead 40	1800															1700	1540	1410	1290	1185	1095	1015	940	875	815
	Lead 20	1200												1165	1045	940	850	770	705	645	595	545	505	470	440	410
	Lead 10	600												585	520	470	425	385	350	320	295	275	255	235	220	205

Applicable Controller Specifications

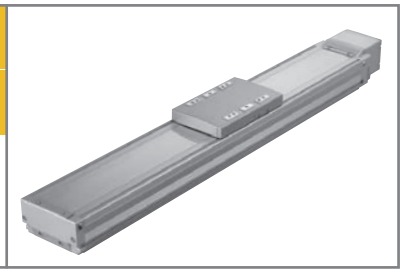
Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPDB series. Other specification values apply commonly to the ISDB and ISPDB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISDB-L-WA-400
Single-axis robot/Large, dustproof type/Actuator width: 150mm/400W
Straight shape

ISPDB-L-WA-400
Single-axis robot/Large, dustproof type/Actuator width: 150mm/400W
Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISDB: Standard specification ISPDB: High precision specification	L	WA: Battery-less Absolute specification	400: 400W	40:40mm 20:20mm 10:10mm	100: 100mm ~ 1300: 1300mm (in 50mm increments)	T2: SCON SSEL XSEL	N : None S : 3m M: 5m X□□: Spec.length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg) Rated acceleration	Payload (Note 1) Vertical (kg) Maximum acceleration	Rated thrust (N)
ISDB[ISPDB]-L-WA-400-40-①-T2-②-③	Battery-less Absolute	400	40	100~1300	1~1800	0.4	1.0	0.4	1.0	40	17	8	5	169.6
ISDB[ISPDB]-L-WA-400-20-①-T2-②-③			20		1~1200	0.4	1.0	0.4	1.0	90	30	20	10	339.1
ISDB[ISPDB]-L-WA-400-10-①-T2-②-③			10		1~600	0.4	0.7	0.4	0.6	120	60	40	30	678.3

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
Double slider	W	P56-1	High straightness, precision specification	ST	P13
Slider roller specification	SR	P56-1	Metal cable joint connector (standard feature)	EU	P12

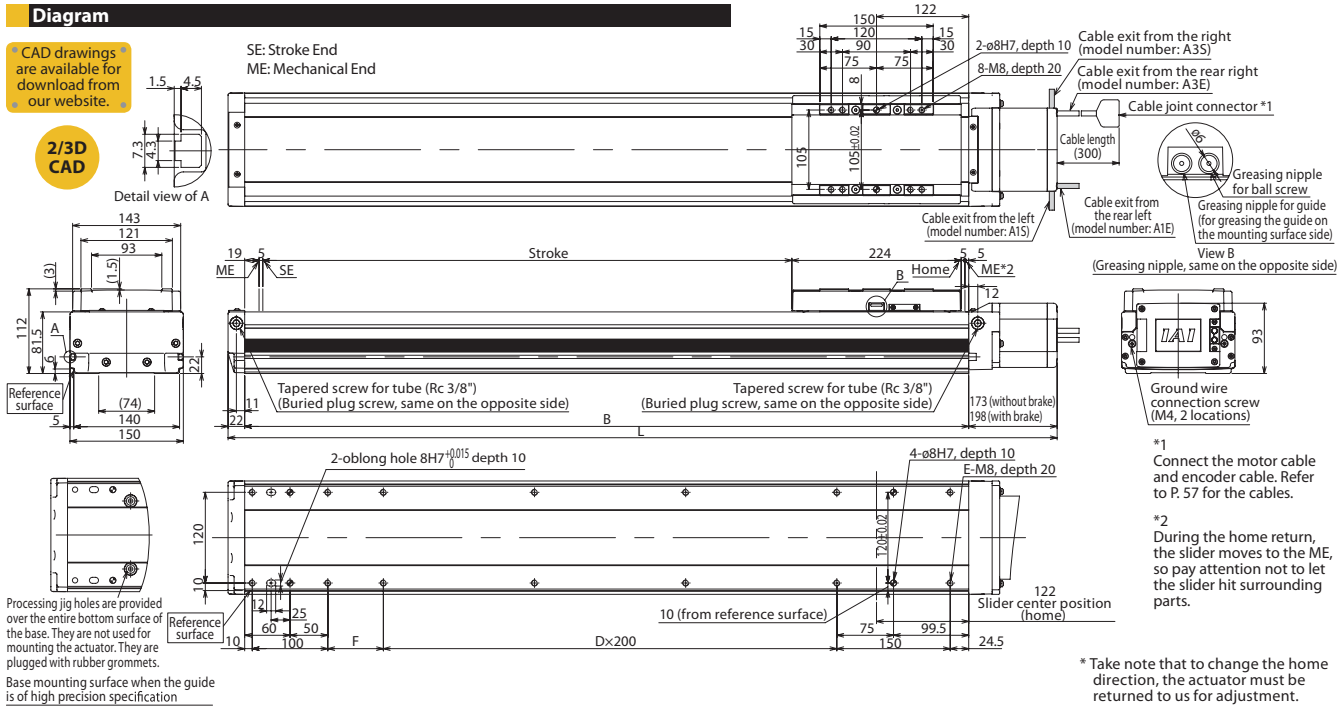
Common Specifications

Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screw ø20mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 123.0N•m Mb: 176.0N•m Mc: 291.0N•m
Overhang load length	Ma direction: 750mm max. Mb, Mc directions: 750mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Protection structure	IP30
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Diagram

CAD drawings are available for download from our website.

2/3D CAD



*1
Connect the motor cable and encoder cable. Refer to P. 57 for the cables.

*2
During the home return, the slider moves to the ME, so pay attention not to let the slider hit surrounding parts.

* Take note that to change the home direction, the actuator must be returned to us for adjustment.

Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.5kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
L	without brake	553	603	653	703	753	803	853	903	953	1003	1053	1103	1153	1203	1253	1303	1353	1403	1453	1503	1553	1603	1653	1703	1753
	with brake	578	628	678	728	778	828	878	928	978	1028	1078	1128	1178	1228	1278	1328	1378	1428	1478	1528	1578	1628	1678	1728	1778
B		358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558
D		0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6
E		8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
F		73.5	123.5	173.5	23.5	73.5	123.5	173.5	23.5	73.5	123.5	173.5	23.5	73.5	123.5	173.5	23.5	73.5	123.5	173.5	23.5	73.5	123.5	173.5	23.5	73.5
Mass (kg)		12.2	13.1	14.0	14.8	15.7	16.6	17.4	18.3	19.2	20.0	20.9	21.8	22.7	23.5	24.4	25.3	26.1	27.0	27.9	28.7	29.6	30.5	31.4	32.2	33.1
Maximum speed (mm/s)	Lead 40	1800															1700	1540	1410	1290	1185	1095	1015	940	875	815
	Lead 20	1200												1165	1045	940	850	770	705	645	595	545	505	470	440	410
	Lead 10	600												585	520	470	425	385	350	320	295	275	255	235	220	205

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
-	-	-	-		-
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

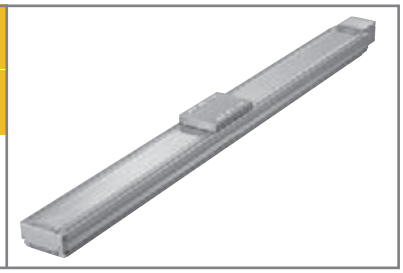
(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPDB series. Other specification values apply commonly to the ISDB and ISPDB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISDB-LX-WA-200

Single-axis robot/Large, dustproof, mid-support type/Actuator width: 150mm/200W Straight shape

ISPDB-LX-WA-200

Single-axis robot/Large, dustproof, mid-support type/Actuator width: 150mm/200W Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISDB: Standard specification ISPDB: High precision specification	LX	WA: Battery-less Absolute specification	200: 200W	40:40mm 20:20mm	1000: 1000mm 〜 1600: 1600mm (in 50 mm increments)	T2: SCON MSCON SSEL XSEL	N : None S : 3m M: 5m X□□: Spec.length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50 mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G)	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg)	Rated thrust (N)
ISDB[ISPDB]-LX-WA-200-40- ①-T2- ②-③	Battery-less Absolute	200	40	1000~1600	1~1800	0.4	Designed exclusively for horizontal use		15	Designed exclusively for horizontal use		85.5
ISDB[ISPDB]-LX-WA-200-20- ①-T2- ②-③			20		1~1200	0.4			45			170.9

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
-	-	-	High straightness, precision specification	ST	P13
-	-	-	Metal cable joint connector (standard feature)	EU	P12

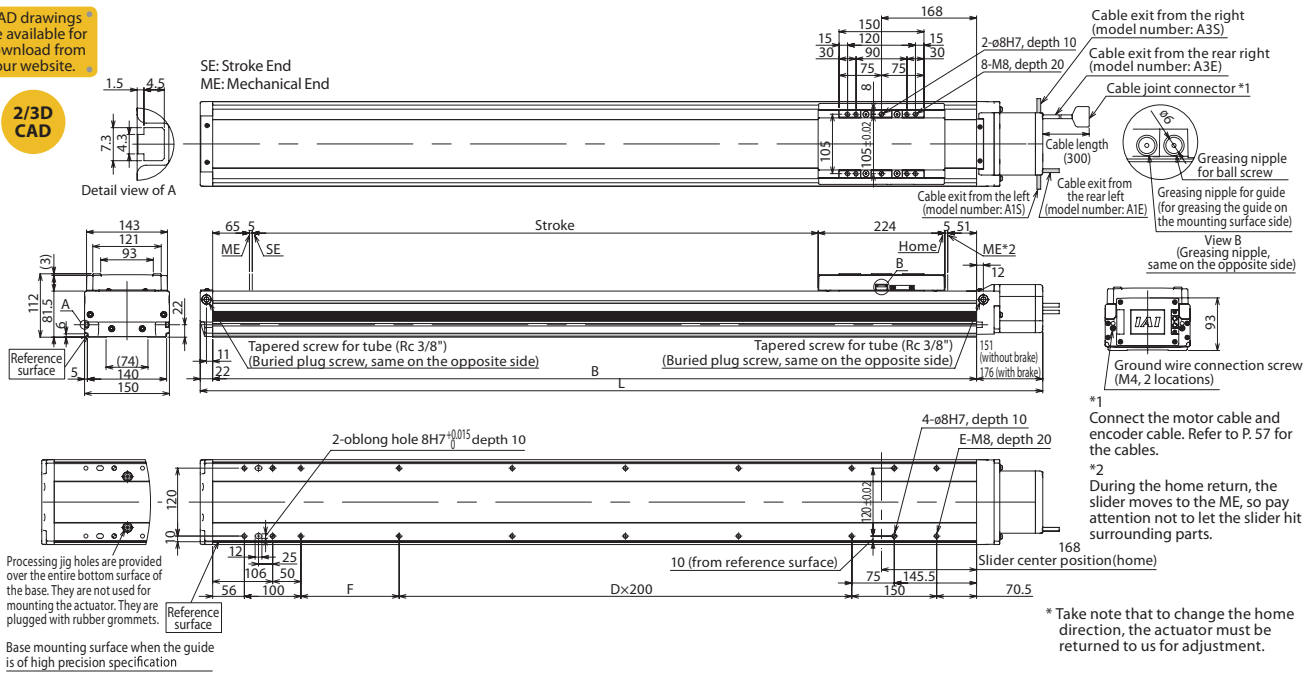
Common Specifications

Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screw ø16mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 123.0N•m Mb: 176.0N•m Mc: 291.0N•m
Overhang load length	Ma direction: 750mm max. Mb, Mc directions: 750mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Protection structure	IP30
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Diagram

CAD drawings are available for download from our website.

2/3D CAD



*1
Connect the motor cable and encoder cable. Refer to P. 57 for the cables.

*2
During the home return, the slider moves to the ME, so pay attention not to let the slider hit surrounding parts.

* Take note that to change the home direction, the actuator must be returned to us for adjustment.

■ Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.5kg. *The max. speed (mm/s) varies depending on the stroke. *Please contact IAI for interim values of 50 mm stroke increments.

Stroke		1000	1100	1200	1300	1400	1500	1600
L	without brake	1523	1623	1723	1823	1923	2023	2123
	with brake	1548	1648	1748	1848	1948	2048	2148
B		1350	1450	1550	1650	1750	1850	1950
D		4	5	5	6	6	7	7
E		16	18	18	20	20	22	22
F		173.5	73.5	173.5	73.5	173.5	73.5	173.5
Mass (kg)		29.7	31.4	33.2	35.0	36.7	38.5	40.2
Maximum speed (mm/s)	Lead 30	1800						1660
	Lead 20	1200			1150	1000	950	830

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

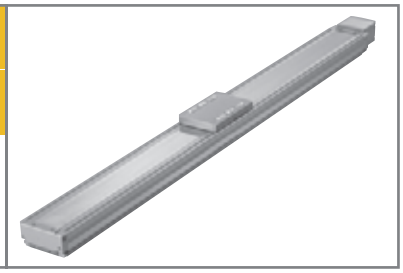
(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPDB series. Other specification values apply commonly to the ISDB and ISPDB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISDB-LX-WA-400

Single-axis robot/Large, dustproof, mid-support type/Actuator width: 150mm/400W Straight shape

ISPDB-LX-WA-400

Single-axis robot/Large, dustproof, mid-support type/Actuator width: 150mm/400W Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISDB: Standard specification ISPDB: High precision specification	LX	WA: Battery-less Absolute specification	400: 400W	40:40mm 20:20mm	1000: 1000mm 〜 1600: 1600mm (in 50 mm increments)	T2: SCON SSEL XSEL	N : None S : 3m M: 5m X□□: Spec. length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50 mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G)	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg) Rated acceleration	Payload (Note 1) Vertical (kg) Maximum acceleration	Rated thrust (N)
ISDB[ISPDB]-LX-WA-400-40- ①-T2- ②- ③	Battery-less Absolute	400	40	1000~1600	1~1800	0.4	Designed exclusively for horizontal use		40		Designed exclusively for horizontal use		169.6
ISDB[ISPDB]-LX-WA-400-20- ①-T2- ②- ③			20		1~1200	0.4			90				339.1

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
-	-	-	High straightness, precision specification	ST	P13
-	-	-	Metal cable joint connector (standard feature)	EU	P12

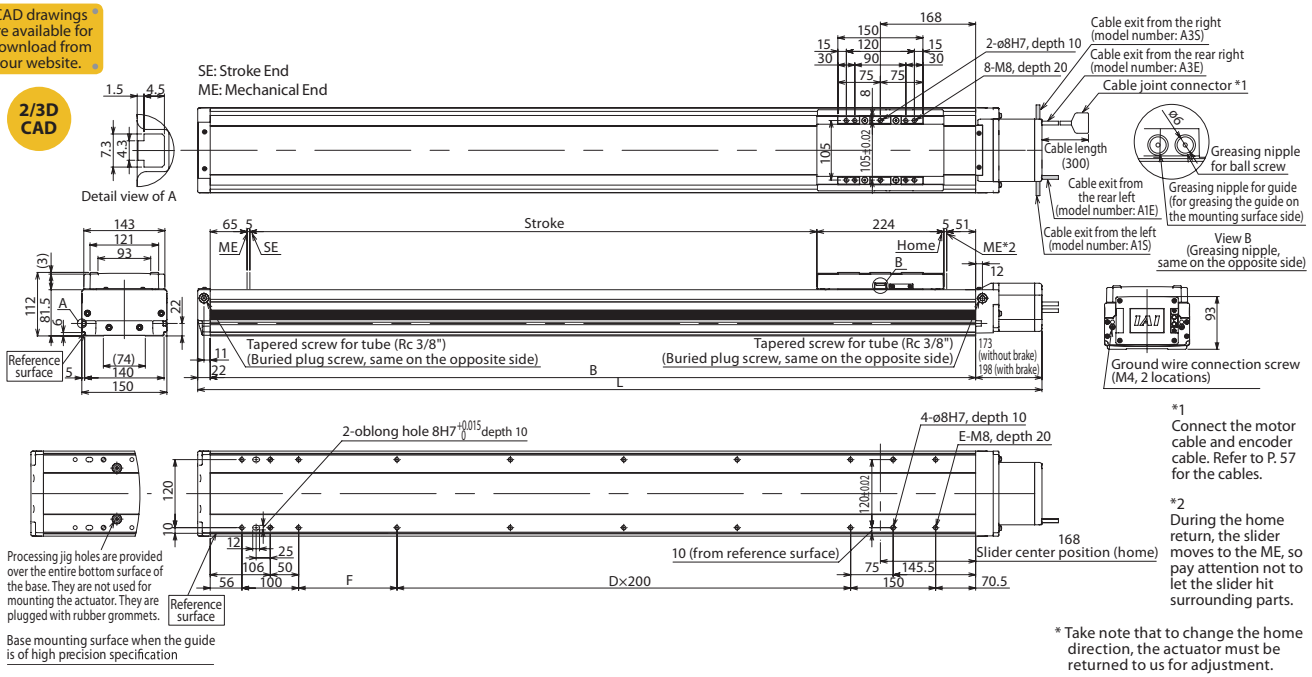
Common Specifications

Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screw ø20mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 123.0N•m Mb: 176.0N•m Mc: 291.0N•m
Overhang load length	Ma direction: 750mm max. Mb, Mc directions: 750mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Protection structure	IP30
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Diagram

CAD drawings are available for download from our website.

2/3D CAD



*1
Connect the motor cable and encoder cable. Refer to P. 57 for the cables.

*2
During the home return, the slider moves to the ME, so pay attention not to let the slider hit surrounding parts.

* Take note that to change the home direction, the actuator must be returned to us for adjustment.

Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.5kg. *The max. speed (mm/s) varies depending on the stroke. *Please contact IAI for interim values of 50 mm stroke increments.

Stroke		1000	1100	1200	1300	1400	1500	1600
L	without brake	1545	1645	1745	1845	1945	2045	2145
	with brake	1570	1670	1770	1870	1970	2070	2170
B		1350	1450	1550	1650	1750	1850	1950
D		4	5	5	6	6	7	7
E		16	18	18	20	20	22	22
F		173.5	73.5	173.5	73.5	173.5	73.5	173.5
Mass (kg)		30.1	31.8	33.6	35.4	37.1	38.9	40.6
Maximum speed (mm/s)	Lead 30	1800						1660
	Lead 20	1200			1150	1000	950	830

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
-	-	-	-		-
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPDB series. Other specification values apply commonly to the ISDB and ISPDB.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISDBCR-S-WA

Single-axis robot for cleanroom/Small/Actuator width: 90mm/60 W
Straight shape

ISPDBCR-S-WA

Single-axis robot for cleanroom/Small/Actuator width: 90mm/60 W
Straight shape **High precision specification**

Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
—	S	WA	60	—	—	T2	—	—
ISDBCR: Standard specification ISPDBCR: High precision specification		WA: Battery-less Absolute specification	60: 60W	16 : 16mm 8 : 8mm 4 : 4mm	100: 100mm 〜 800: 800mm (in 50mm increments)	T2: SCON MSCON SSEL XSEL	N : None S : 3m M: 5m X□□: Spec. length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg)** Rated acceleration	Payload (Note 1) Vertical (kg)** Maximum acceleration	Rated thrust (N)	Suction flow rate (Nℓ/min)
ISDBCR[ISPDBCR]-S-WA-60-16-①-T2-②-③	Battery-less Absolute	60	16	100~800	1~960	0.4	1.0	0.4	0.8	13	4.5	3	2	53.1	60
ISDBCR[ISPDBCR]-S-WA-60-8-①-T2-②-③			8		1~480	0.4	0.7	0.4	0.6	27	12	6	5	106.1	30
ISDBCR[ISPDBCR]-S-WA-60-4-①-T2-②-③			4		1~240	0.2	0.5	0.2	0.4	55	30	14	12	212.3	15

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).
**If the guide with ball retention mechanism (RT) is used, the vertical payload decreases by 0.5kg. (Please also refer to P.9).

Option

Name	Model number	Reference page
Cable exit from the left	A1S	P11
Cable exit from the rear left	A1E	P11
Cable exit from the right	A3S	P11
Cable exit from the rear right	A3E	P11
AQ seal (standard feature)	AQ	P11
Brake	B	P11
Double slider	W	P56-1
Suction tube joint on oppositec side	VR	P12

Name	Model number	Reference page
Creep sensor (alternatively on opposite side)	C (CL)	P11
Home limit switch (alternatively on opposite side)	L (LL)	P11
Non-motor side specification	NM	P12
Guide with ball retention mechanism	RT	P12
Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Slave axis specification	S	P12
High straightness, precision specification	ST	P13
Metal cable joint connector (standard feature)	EU	P12
Anti-electrostatic specification	ESD	P56-1

Common Specifications

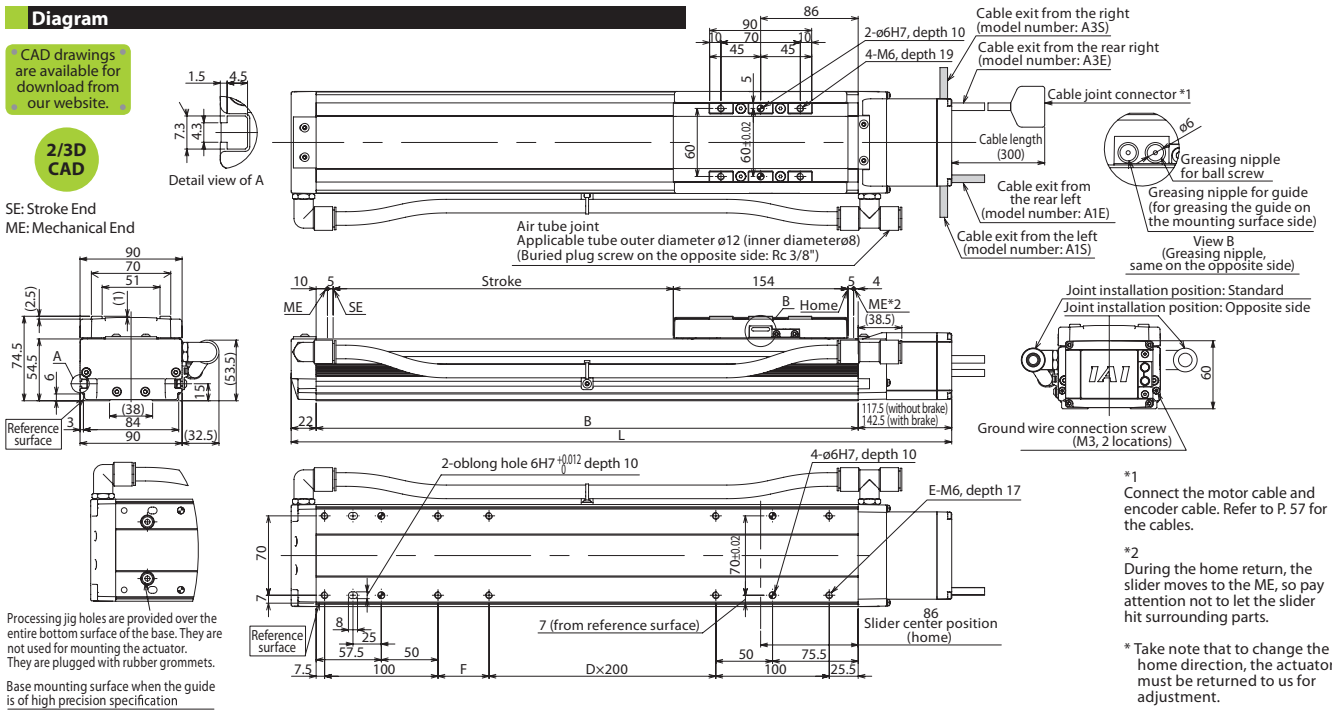
Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screw ø12mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 32.9N•m Mb: 47.0N•m Mc: 76.8N•m
Overhang load length	Ma direction: 450mm max. Mb, Mc directions: 450mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Grease	Low dust-raising grease (for ball screw and guide)
Cleanliness class	ISO class 4 (US FED STD class 10)
Suction tube joint	Quick connect joint, applicable tube outer diameter ø12mm

Diagram

CAD drawings are available for download from our website.

2/3D CAD

SE: Stroke End
ME: Mechanical End



Processing jig holes are provided over the entire bottom surface of the base. They are not used for mounting the actuator. They are plugged with rubber grommets.

Base mounting surface when the guide is of high precision specification

*1
Connect the motor cable and encoder cable. Refer to P. 57 for the cables.

*2
During the home return, the slider moves to the ME, so pay attention not to let the slider hit surrounding parts.

* Take note that to change the home direction, the actuator must be returned to us for adjustment.

■ Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.2kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	without brake	417.5	467.5	517.5	567.5	617.5	667.5	717.5	767.5	817.5	867.5	917.5	967.5	1017.5	1067.5	1117.5
	with brake	442.5	492.5	542.5	592.5	642.5	692.5	742.5	792.5	842.5	892.5	942.5	992.5	1042.5	1092.5	1142.5
B		278	328	378	428	478	528	578	628	678	728	778	828	878	928	978
D		0	0	0	0	1	1	1	1	2	2	2	2	3	3	3
E		8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
F		45	95	145	195	45	95	145	195	45	95	145	195	45	95	145
Mass (kg)		4.2	4.5	4.9	5.2	5.6	6.0	6.3	6.7	7.0	7.4	7.8	8.1	8.5	8.9	9.2
Maximum speed (mm/s)	Lead 16	960									920	795	690	610	540	480
	Lead 8	480									460	400	345	305	270	240
	Lead 4	240									230	200	170	150	135	120

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPDBCR series. Other specification values apply commonly to the ISDBCR and ISPDBCR.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISDBCR-M-WA-100

Single-axis robot for cleanroom/Medium/Actuator width: 120mm/100W Straight shape

ISPDBCR-M-WA-100

Single-axis robot for cleanroom/Medium/Actuator width: 120mm/100W Straight shape **High precision specification**

Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISDBCR: Standard specification ISPDBCR: High precision specification	M	WA: Battery-less Absolute specification	100: 100W	30 :30mm 20 :20mm 10 :20mm 5 : 5mm	100: 100mm 〜 1100: 1100mm (in 50mm increments)	T2: SCON MSCON SSEL XSEL	N : None S : 3m M: 5m X□□: Spec.length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg)** Rated acceleration	Payload (Note 1) Vertical (kg)** Maximum acceleration	Rated thrust (N)	Suction flow rate (N ℓ/min)
ISDBCR[ISPDBCR]-M-WA-100-30- ① -T2- ② - ③	Battery-less Absolute	100	30	100~1100	1~1800	0.4	1.0	0.4	1.0	15	4	2	1.2	56.6	180
ISDBCR[ISPDBCR]-M-WA-100-20- ① -T2- ② - ③			20		1~1200	0.4	1.0	0.4	1.0	23	8	4	2.5	84.9	120
ISDBCR[ISPDBCR]-M-WA-100-10- ① -T2- ② - ③			10		1~600	0.4	0.7	0.4	0.6	45	20	10	7	169.8	50
ISDBCR[ISPDBCR]-M-WA-100-5- ① -T2- ② - ③			5		1~300	0.2	0.5	0.2	0.4	85	45	20	15	339.7	20

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).
**If the guide with ball retention mechanism (RT) is used, the vertical payload decreases by 0.5kg. (Please also refer to P.9).

Option

Name	Model number	Reference page
Cable exit from the left	A1S	P11
Cable exit from the rear left	A1E	P11
Cable exit from the right	A3S	P11
Cable exit from the rear right	A3E	P11
AQ seal (standard feature)	AQ	P11
Brake	B	P11
Double slider	W	P56-1
Suction tube joint on oppositec side	VR	P12

Name	Model number	Reference page
Creep sensor (alternatively on opposite side)	C (CL)	P11
Home limit switch (alternatively on opposite side)	L (LL)	P11
Non-motor side specification	NM	P12
Guide with ball retention mechanism	RT	P12
Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Slave axis specification	S	P12
High straightness, precision specification	ST	P13
Metal cable joint connector (standard feature)	EU	P12
Anti-electrostatic specification	ESD	P56-1

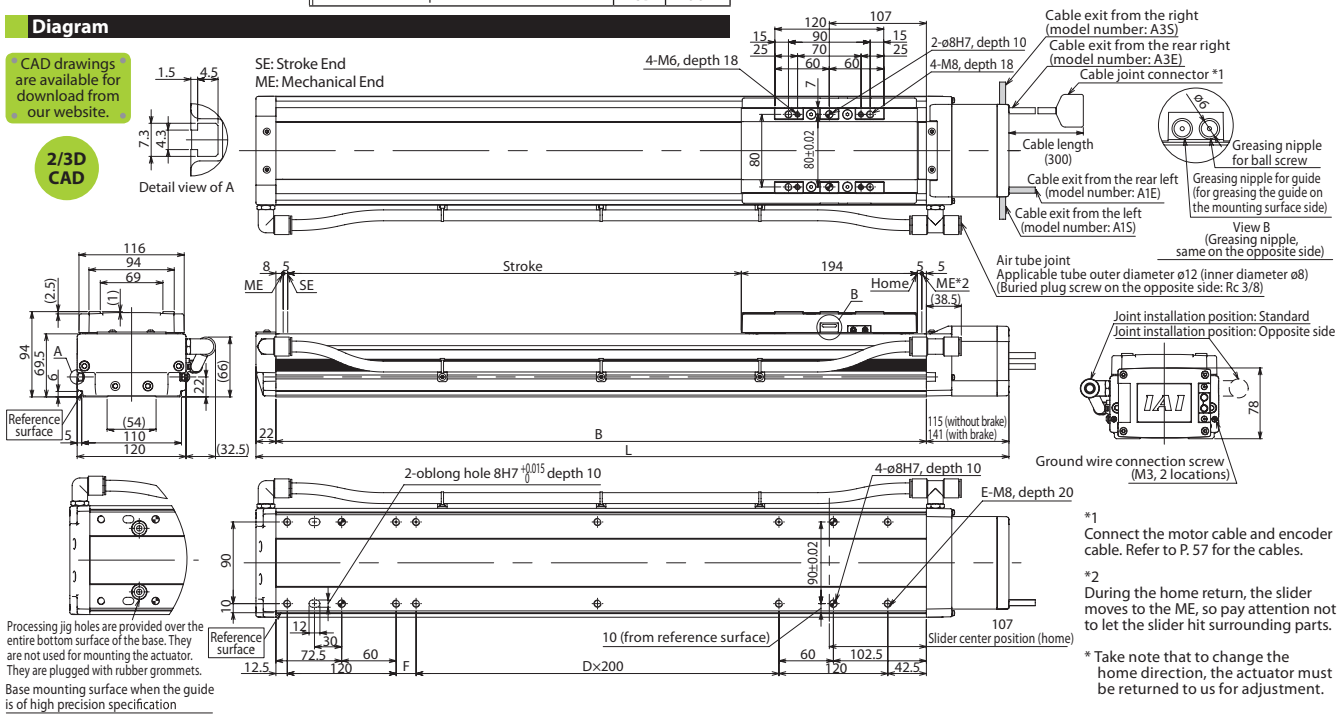
Common Specifications

Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screw ø16mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 81.0N•m Mb: 116.0N•m Mc: 189.0N•m
Overhang load length	Ma direction: 600mm max. Mb, Mc directions: 600mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Grease	Low dust-raising grease (for ball screw and guide)
Cleanliness class	ISO class 4 (US FED STD class 10)
Suction tube joint	Quick connect joint, applicable tube outer diameter ø12mm

Diagram

CAD drawings are available for download from our website.

2/3D CAD



*1
Connect the motor cable and encoder cable. Refer to P. 57 for the cables.

*2
During the home return, the slider moves to the ME, so pay attention not to let the slider hit surrounding parts.

* Take note that to change the home direction, the actuator must be returned to us for adjustment.

Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.3kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L	without brake	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304	1354	1404	1454
	with brake	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330	1380	1430	1480
B		317	367	417	467	517	567	617	667	717	767	817	867	917	967	1017	1067	1117	1167	1217	1267	1317
D		0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
E		8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
F		22	72	122	172	22	72	122	172	22	72	122	172	22	72	122	172	22	72	122	172	22
Mass (kg)		7.6	8.2	8.8	9.5	10.1	10.7	11.3	12.0	12.6	13.2	13.9	14.5	15.1	15.7	16.4	17.0	17.6	18.2	18.9	19.5	20.1
Maximum speed (mm/s)	Lead 30	1800											1630	1440	1280	1150	1035	935	850	780	715	660
	Lead 20	1200											1085	960	855	765	690	625	570	520	475	440
	Lead 10	600											545	480	430	380	345	310	285	260	240	220
	Lead 5	300											270	240	215	190	170	155	140	130	120	110

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPDBCR series. Other specification values apply commonly to the ISDBCR and ISPDBCR.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

ISDBCR-M-WA-200

Single-axis robot for cleanroom/Medium/Actuator width: 120mm/200W Straight shape

ISPDBCR-M-WA-200

Single-axis robot for cleanroom/Medium/Actuator width: 120mm/200W Straight shape **High precision specification**

Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISDBCR: Standard specification ISPDBCR: High precision specification	M	WA WA: Battery-less Absolute specification	200 200: 200W	30 :30mm 20 :20mm 10 :10mm 5 : 5mm	100: 100mm ~ 1100: 1100mm (in 50mm increments)	T2: SCON MSCON SSEL XSEL	N : None S : 3m M: 5m X□□: Spec. length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg) Rated acceleration	Payload (Note 1) Vertical (kg) Maximum acceleration	Rated thrust (N)	Suction flow rate (N ℓ/min)
ISDBCR[ISPDBCR]-M-WA-200-30- ① -T2- ② - ③	Battery-less Absolute	200	30	100~1100	1~1800	0.4	1.0	0.4	1.0	30	12	6	3	113.9	180
ISDBCR[ISPDBCR]-M-WA-200-20- ① -T2- ② - ③			20		1~1200	0.4	1.0	0.4	1.0	45	16	10	5	170.9	120
ISDBCR[ISPDBCR]-M-WA-200-10- ① -T2- ② - ③			10		1~600	0.4	0.7	0.4	0.6	90	40	20	15	341.8	50
ISDBCR[ISPDBCR]-M-WA-200-5- ① -T2- ② - ③			5		1~300	0.2	0.5	0.2	0.4	110	80	40	30	683.6	20

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
Double slider	W	P56-1	High straightness, precision specification	ST	P13
Suction tube joint on oppositec side	VR	P12	Metal cable joint connector (standard feature)	EU	P12
			Anti-electrostatic specification	ESD	P56-1

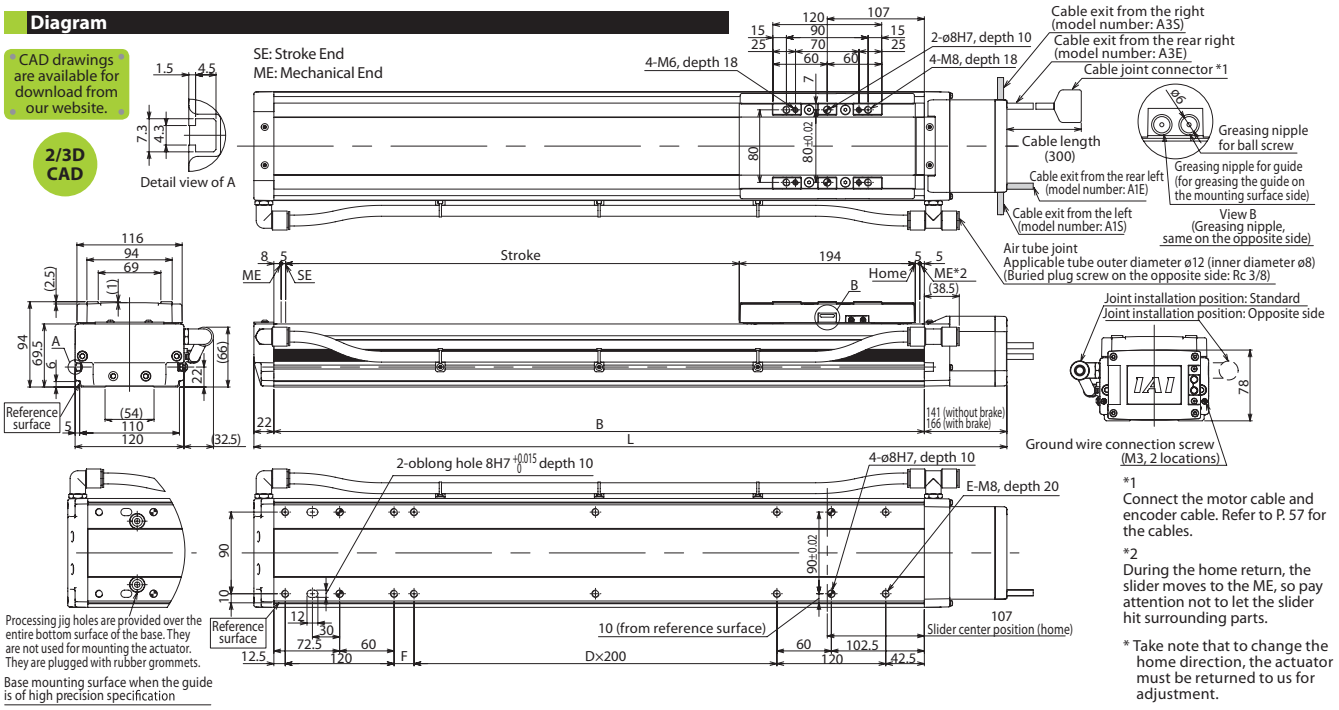
Common Specifications

Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screw ø16mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 81.0N•m Mb: 116.0N•m Mc: 189.0N•m
Overhang load length	Ma direction: 600mm max. Mb, Mc directions: 600mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Grease	Low dust-raising grease (for ball screw and guide)
Cleanliness class	ISO class 4 (US FED STD class 10)
Suction tube joint	Quick connect joint, applicable tube outer diameter ø12mm

Diagram

CAD drawings are available for download from our website.

2/3D CAD



*1
Connect the motor cable and encoder cable. Refer to P. 57 for the cables.

*2
During the home return, the slider moves to the ME, so pay attention not to let the slider hit surrounding parts.

* Take note that to change the home direction, the actuator must be returned to us for adjustment.

■Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.4kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L	without brake	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330	1380	1430	1480
	with brake	505	555	605	655	705	755	805	855	905	955	1005	1055	1105	1155	1205	1255	1305	1355	1405	1455	1505
B		317	367	417	467	517	567	617	667	717	767	817	867	917	967	1017	1067	1117	1167	1217	1267	1317
D		0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
E		8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
F		22	72	122	172	22	72	122	172	22	72	122	172	22	72	122	172	22	72	122	172	22
Mass (kg)		8.0	8.6	9.2	9.9	10.5	11.1	11.7	12.4	13.0	13.6	14.3	14.9	15.5	16.1	16.8	17.4	18.0	18.6	19.3	19.9	20.5
Maximum speed (mm/s)	Lead 30	1800											1630	1440	1280	1150	1035	935	850	780	715	660
	Lead 20	1200											1085	960	855	765	690	625	570	520	475	440
	Lead 10	600											545	480	430	380	345	310	285	260	240	220
	Lead 5	300											270	240	215	190	170	155	140	130	120	110

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

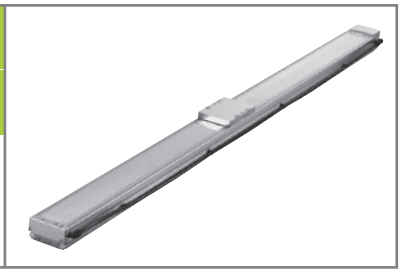
(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPDBCR series. Other specification values apply commonly to the ISDBCR and ISPDBCR.
(Note 5) When the traveling life is 10,000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISDBCR-MX-WA-200

Single-axis robot for cleanroom/Medium, mid-support type/Actuator width: 120mm/200 W Straight shape

ISPDBCR-MX-WA-200

Single-axis robot for cleanroom/Medium, mid-support type/Actuator width: 120mm/200W Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISDBCR: Standard specification ISPDBCR: High precision specification	MX	WA: Battery-less Absolute specification	200: 200W	30 :30mm 20 :20mm	800: 800mm ~ 2000: 2000mm (in 50 mm increments)	T2: SCON MSCON SSEL XSEL	N : None S : 3m M: 5m X□□: Spec. length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 100mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G)	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg) Rated acceleration	Payload (Note 1) Vertical (kg) Maximum acceleration	Rated thrust (N)	Suction flow rate (N ℓ/min)
ISDBCR[ISPDBCR]-MX-WA-200-30- ① -T2- ② - ③	Battery-less Absolute	200	30	800~2000	1~1800	0.4	Designed exclusively for horizontal use		30		Designed exclusively for horizontal use		113.9	180
ISDBCR[ISPDBCR]-MX-WA-200-20- ① -T2- ② - ③			20		1~1200	0.4			45				170.9	120

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
-	-	-	High straightness, precision specification	ST	P13
Suction tube joint on oppositec side	VR	P12	Metal cable joint connector (standard feature)	EU	P12

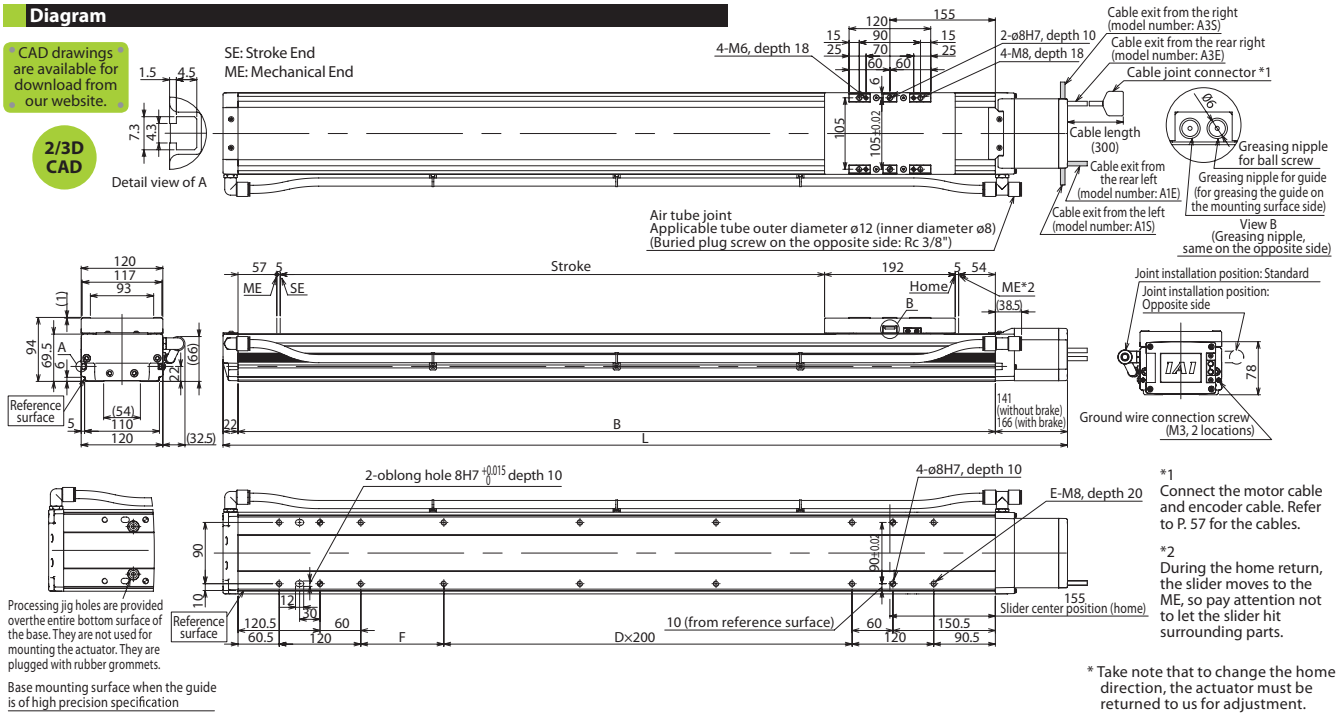
Common Specifications

Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screw ø16mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 81.0N•m Mb: 116.0N•m Mc: 189.0N•m
Overhang load length	Ma direction: 600mm max. Mb, Mc directions: 600mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Grease	Low dust-raising grease (for ball screw and guide)
Cleanliness class	ISO class 4 (US FED STD class 10)
Suction tube joint	Quick connect joint, applicable tube outer diameter ø12mm

Diagram

CAD drawings are available for download from our website.

2/3D CAD



*1
Connect the motor cable and encoder cable. Refer to P. 57 for the cables.

*2
During the home return, the slider moves to the ME, so pay attention not to let the slider hit surrounding parts.

* Take note that to change the home direction, the actuator must be returned to us for adjustment.

■ Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.5kg. *The max. speed (mm/s) varies depending on the stroke. *Please contact IAI for interim values of 50 mm stroke increments.

Stroke		800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
L	without brake	1276	1376	1476	1576	1676	1776	1876	1976	2076	2176	2276	2376	2476
	with brake	1301	1401	1501	1601	1701	1801	1901	2001	2101	2201	2301	2401	2501
B		1113	1213	1313	1413	1513	1613	1713	1813	1913	2013	2113	2213	2313
D		3	3	4	4	5	5	6	6	7	7	8	8	9
E		14	14	16	16	18	18	20	20	22	22	24	24	26
F		122	222	122	222	122	222	122	222	122	222	122	222	122
Mass (kg)		18.5	19.8	21.0	22.3	23.6	24.9	26.2	27.4	28.7	30.0	31.3	32.5	33.8
Maximum speed (mm/s)	Lead 30	1800				1650	1500	1425	1200	1050	900	825	750	675
	Lead 20	1200				1100	1000	950	800	700	600	550	500	450

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

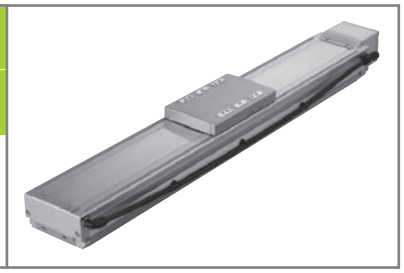
(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPDBCR series. Other specification values apply commonly to the ISDBCR and ISPDBCR.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISDBCR-L-WA-200

Single-axis robot for cleanroom/Large/Actuator width: 150mm/200 W Straight shape

ISPDBCR-L-WA-200

Single-axis robot for cleanroom/Large/Actuator width: 150mm/200W Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISDBCR: Standard specification ISPDBCR: High precision specification	L	WA: Battery-less Absolute specification	200: 200W	40 :40mm 20 :20mm 10 :10mm	100: 100mm 〜 1300: 1300mm (in 50 mm increments)	T2: SCON MSCON SSEL XSEL	N : None S : 3m M: 5m X□□: Spec. length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg)** Rated acceleration	Payload (Note 1) Vertical (kg)** Maximum acceleration	Rated thrust (N)	Suction flow rate (Nℓ/min)
ISDBCR[ISPDBCR]-L-WA-200-40-①-T2-②-③	Battery-less Absolute	200	40	100~1300	1~1800	0.4	1.0	0.4	1.0	15	7	2.5	2	85.5	180
ISDBCR[ISPDBCR]-L-WA-200-20-①-T2-②-③			20		1~1200	0.4	1.0	0.4	1.0	45	15	9	5	170.9	120
ISDBCR[ISPDBCR]-L-WA-200-10-①-T2-②-③			10		1~600	0.4	0.7	0.4	0.6	90	40	20	14	341.8	50

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).
**If the guide with ball retention mechanism (RT) is used, the vertical payload decreases by 1.0kg. (Please also refer to P.9).

Option

Name	Model number	Reference page
Cable exit from the left	A1S	P11
Cable exit from the rear left	A1E	P11
Cable exit from the right	A3S	P11
Cable exit from the rear right	A3E	P11
AQ seal (standard feature)	AQ	P11
Brake	B	P11
Double slider	W	P56-1
Suction tube joint on oppositec side	VR	P12

Name	Model number	Reference page
Creep sensor (alternatively on opposite side)	C (CL)	P11
Home limit switch (alternatively on opposite side)	L (LL)	P11
Non-motor side specification	NM	P12
Guide with ball retention mechanism	RT	P12
Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Slave axis specification	S	P12
High straightness, precision specification	ST	P13
Metal cable joint connector (standard feature)	EU	P12
Anti-electrostatic specification	ESD	P56-1

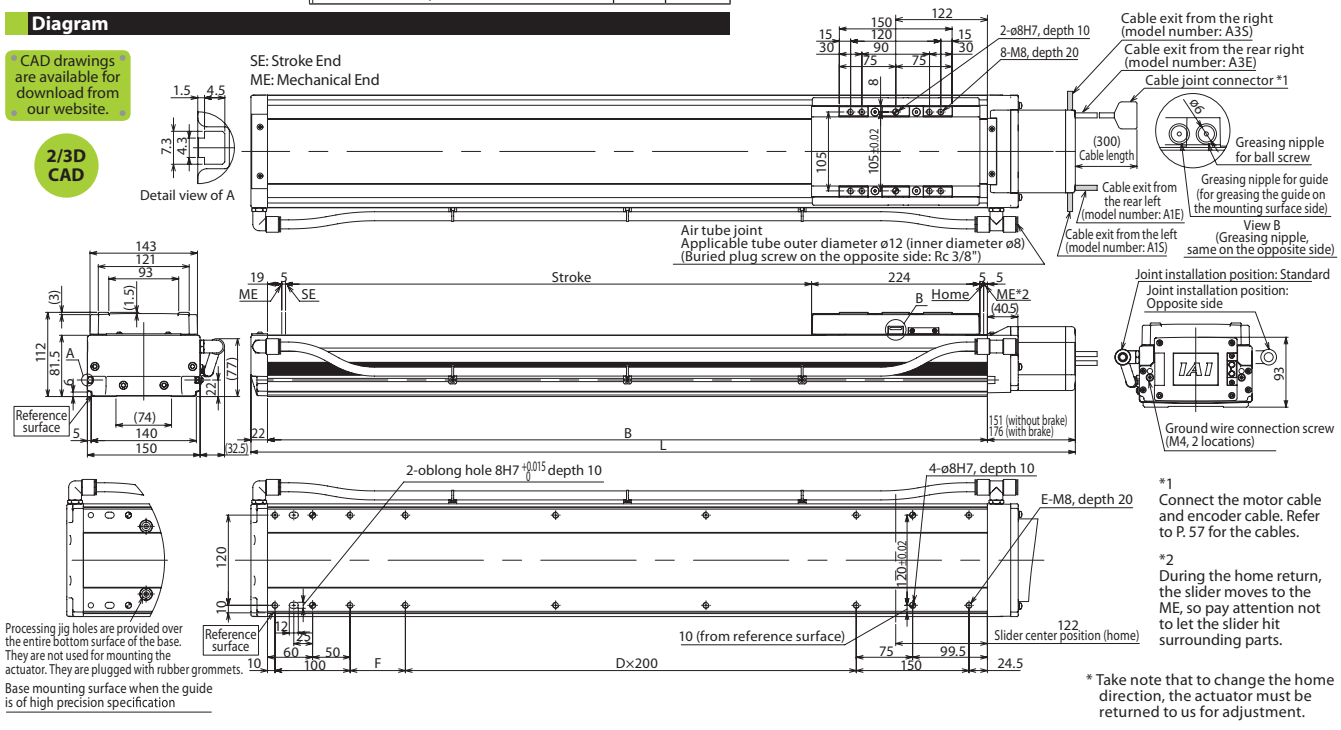
Common Specifications

Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screw ø20mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 123.0N•m Mb: 176.0N•m Mc: 291.0N•m
Overhang load length	Ma direction: 750mm max. Mb, Mc directions: 750mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Grease	Low dust-raising grease (for ball screw and guide)
Cleanliness class	ISO class 4 (US FED STD class 10)
Suction tube joint	Quick connect joint, applicable tube outer diameter ø12mm

Diagram

CAD drawings are available for download from our website.

2/3D CAD



*1
Connect the motor cable and encoder cable. Refer to P. 57 for the cables.

*2
During the home return, the slider moves to the ME, so pay attention not to let the slider hit surrounding parts.

* Take note that to change the home direction, the actuator must be returned to us for adjustment.

Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.5kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
L	without brake	531	581	631	681	731	781	831	881	931	981	1031	1081	1131	1181	1231	1281	1331	1381	1431	1481	1531	1581	1631	1681	1731
	with brake	556	606	656	706	756	806	856	906	956	1006	1056	1106	1156	1206	1256	1306	1356	1406	1456	1506	1556	1606	1656	1706	1756
B		358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558
D		0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6
E		8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
F		73.5	123.5	173.5	23.5	73.5	123.5	173.5	23.5	73.5	123.5	173.5	23.5	73.5	123.5	173.5	23.5	73.5	123.5	173.5	23.5	73.5	123.5	173.5	23.5	73.5
Mass (kg)		11.9	12.7	13.6	14.4	15.3	16.2	17.0	17.9	18.7	19.6	20.4	21.3	22.1	23.0	23.9	24.7	25.6	26.4	27.3	28.1	29.0	29.8	30.7	31.5	32.4
Maximum speed (mm/s)	Lead 40	1800															1700	1540	1410	1290	1185	1095	1015	940	875	815
	Lead 20	1200												1165	1045	940	850	770	705	645	595	545	505	470	440	410
	Lead 10	600												585	520	470	425	385	350	320	295	275	255	235	220	205

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

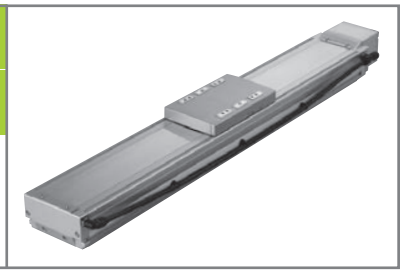
(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPDBCR series. Other specification values apply commonly to the ISDBCR and ISPDBCR.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters. (Example. X08 = 8m)

ISDBCR-L-WA-400

Single-axis robot for cleanroom/Large/Actuator width: 150mm/400W Straight shape

ISPDBCR-L-WA-400

Single-axis robot for cleanroom/Large/Actuator width: 150mm/400 W Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISDBCR: Standard specification ISPDBCR: High precision specification	L	WA: Battery-less Absolute specification	400: 400W	40: 40mm 20: 20mm 10: 10mm	100: 100mm ~ 1300: 1300mm (in 50 mm increments)	T2: SCON SSEL XSEL	N: None S: 3m M: 5m X□□: Spec.length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg) Rated acceleration	Payload (Note 1) Vertical (kg) Maximum acceleration	Rated thrust (N)	Suction flow rate (Nℓ/min)
ISDBCR[ISPDBCR]-L-WA-400-40-①-T2-②-③	Battery-less Absolute	400	40	100~1300	1~1800	0.4	1.0	0.4	1.0	40	17	8	5	169.6	180
ISDBCR[ISPDBCR]-L-WA-400-20-①-T2-②-③			20		1~1200	0.4	1.0	0.4	1.0	90	30	20	10	339.1	120
ISDBCR[ISPDBCR]-L-WA-400-10-①-T2-②-③			10		1~600	0.4	0.7	0.4	0.6	120	60	40	30	678.3	50

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page
Cable exit from the left	A1S	P11
Cable exit from the rear left	A1E	P11
Cable exit from the right	A3S	P11
Cable exit from the rear right	A3E	P11
AQ seal (standard feature)	AQ	P11
Brake	B	P11
Double slider	W	P56-1
Suction tube joint on oppositec side	VR	P12

Name	Model number	Reference page
Creep sensor (alternatively on opposite side)	C (CL)	P11
Home limit switch (alternatively on opposite side)	L (LL)	P11
Non-motor side specification	NM	P12
Guide with ball retention mechanism	RT	P12
Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Slave axis specification	S	P12
High straightness, precision specification	ST	P13
Metal cable joint connector (standard feature)	EU	P12
Anti-electrostatic specification	ESD	P56-1

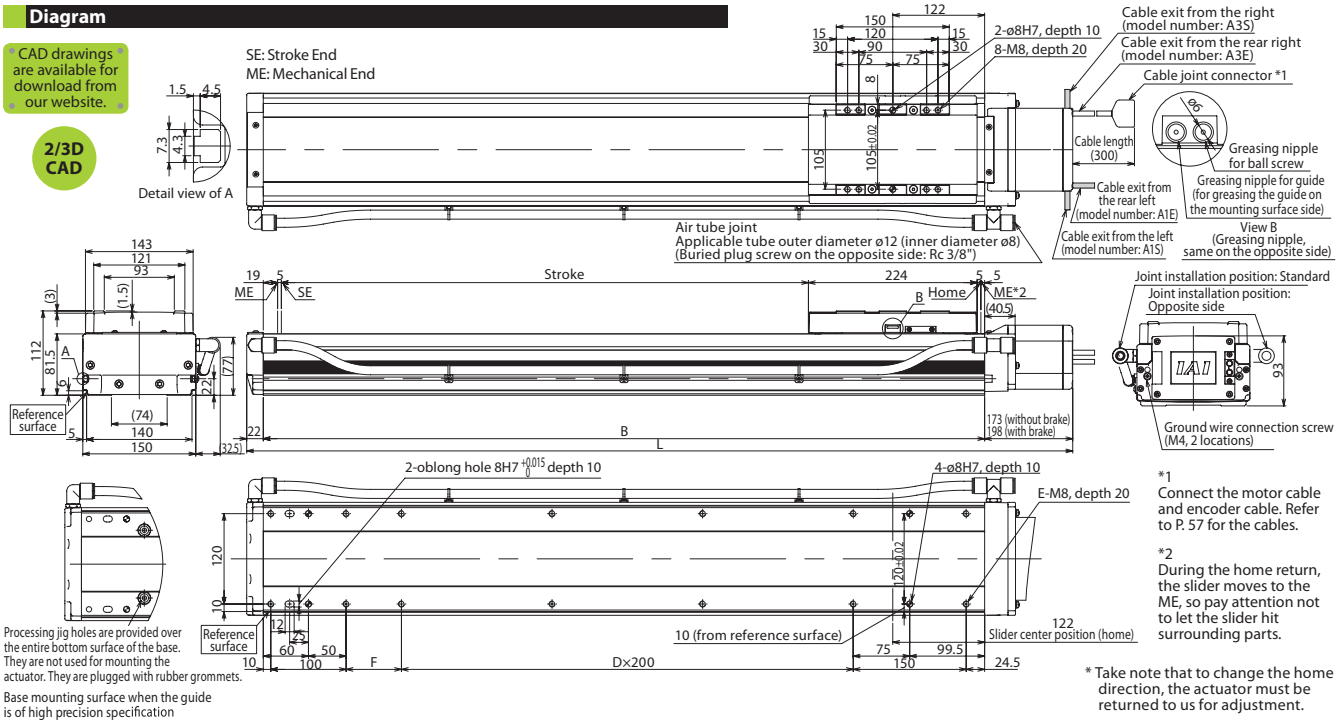
Common Specifications

Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screw ø20mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 123.0N•m Mb: 176.0N•m Mc: 291.0N•m
Overhang load length	Ma direction: 750mm max. Mb, Mc directions: 750mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Grease	Low dust-raising grease (for ball screw and guide)
Cleanliness class	ISO class 4 (US FED STD class 10)
Suction tube joint	Quick connect joint, applicable tube outer diameter ø12mm

Diagram

CAD drawings are available for download from our website.

2/3D CAD



*1
Connect the motor cable and encoder cable. Refer to P. 57 for the cables.

*2
During the home return, the slider moves to the ME, so pay attention not to let the slider hit surrounding parts.

* Take note that to change the home direction, the actuator must be returned to us for adjustment.

■ Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.5kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
L	without brake	553	603	653	703	753	803	853	903	953	1003	1053	1103	1153	1203	1253	1303	1353	1403	1453	1503	1553	1603	1653	1703	1753
	with brake	578	628	678	728	778	828	878	928	978	1028	1078	1128	1178	1228	1278	1328	1378	1428	1478	1528	1578	1628	1678	1728	1778
B		358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558
D		0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6
E		8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
F		73.5	123.5	173.5	23.5	73.5	123.5	173.5	23.5	73.5	123.5	173.5	23.5	73.5	123.5	173.5	23.5	73.5	123.5	173.5	23.5	73.5	123.5	173.5	23.5	73.5
Mass (kg)		12.3	13.1	14.0	14.8	15.7	16.6	17.4	18.3	19.1	20.0	20.8	21.7	22.5	23.4	24.3	25.1	26.0	26.8	27.7	28.5	29.4	30.2	31.1	31.9	32.8
Maximum speed (mm/s)	Lead 40	1800												1700	1540	1410	1290	1185	1095	1015	940	875	815			
	Lead 20	1200												1165	1045	940	850	770	705	645	595	545	505	470	440	410
	Lead 10	600												585	520	470	425	385	350	320	295	275	255	235	220	205

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
-	-	-	-		-
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

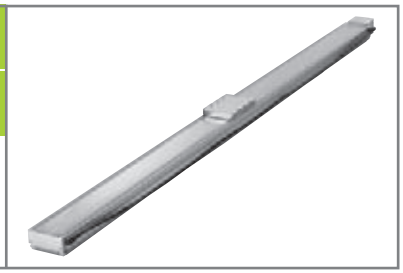
(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPDBCR series. Other specification values apply commonly to the ISDBCR and ISPDBCR.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISDBCR-LX-WA-200

Single-axis robot for cleanroom/Large, mid-support type/Actuator width: 150mm/200W Straight shape

ISPDBCR-LX-WA-200

Single-axis robot for cleanroom/Large, mid-support type/Actuator width: 150mm/200W Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISDBCR: Standard specification ISPDBCR: High precision specification	LX	WA: Battery-less Absolute specification	200: 200W	40 :40mm 20 :20mm	1000: 1000mm 〜 2500: 2500mm (in 50 mm increments)	T2: SCON MSCON SSEL XSEL	N : None S : 3m M : 5m X□□:Spec. length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 100mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg) Rated acceleration	Payload (Note 1) Vertical (kg) Maximum acceleration	Rated thrust (N)	Suction flow rate (Nℓ/min)
ISDBCR[ISPDBCR]-LX-WA-200-40- ① -T2- ② - ③	Battery-less Absolute	200	40	1000~2500	1~1800	0.4		Designed exclusively for horizontal use		15		Designed exclusively for horizontal use		85.5	180
ISDBCR[ISPDBCR]-LX-WA-200-20- ① -T2- ② - ③			20		1~1200	0.4				45				170.9	120

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
-	-	-	High straightness, precision specification	ST	P13
Suction tube joint on oppositec side	VR	P12	Metal cable joint connector (standard feature)	EU	P12

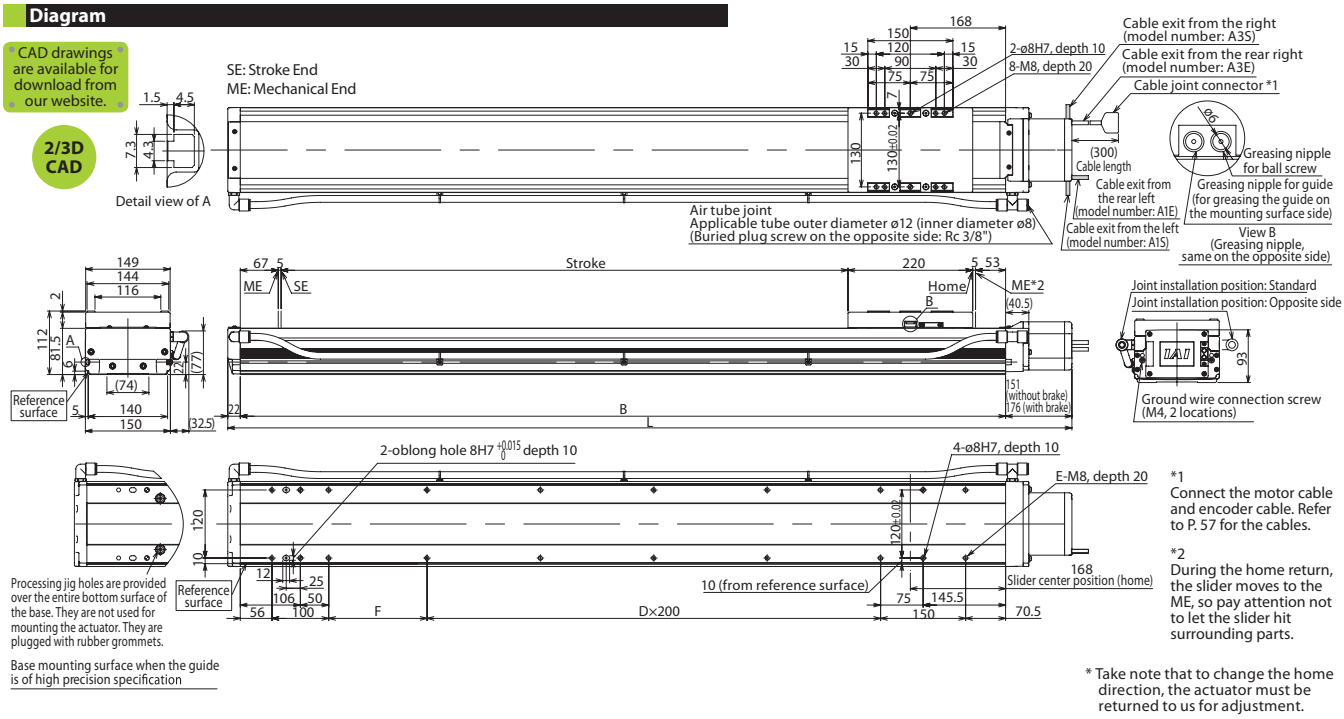
Common Specifications

Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screw ø20mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 123.0N•m Mb: 176.0N•m Mc: 291.0N•m
Overhang load length	Ma direction: 750mm max. Mb, Mc directions: 750mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, MSCON-C, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Grease	Low dust-raising grease (for ball screw and guide)
Cleanliness class	ISO class 4 (US FED STD class 10)
Suction tube joint	Quick connect joint, applicable tube outer diameter ø12mm

Diagram

CAD drawings are available for download from our website.

2/3D CAD



*1 Connect the motor cable and encoder cable. Refer to P. 57 for the cables.

*2 During the home return, the slider moves to the ME, so pay attention not to let the slider hit surrounding parts.

* Take note that to change the home direction, the actuator must be returned to us for adjustment.

Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.5kg. *The max. speed (mm/s) varies depending on the stroke. *Please contact IAI for interim values of 50 mm stroke increments.

Stroke		1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	without brake	1523	1623	1723	1823	1923	2023	2123	2223	2323	2423	2523	2623	2723	2823	2923	3023
	with brake	1548	1648	1748	1848	1948	2048	2148	2248	2348	2448	2548	2648	2748	2848	2948	3048
B		1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
D		4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
E		16	18	18	20	20	22	22	24	24	26	26	28	28	30	30	32
F		173.5	73.5	173.5	73.5	173.5	73.5	173.5	73.5	173.5	73.5	173.5	73.5	173.5	73.5	173.5	73.5
Mass (kg)		29.8	31.5	33.2	35.0	36.7	38.4	40.2	41.9	43.6	45.4	47.1	48.8	50.6	52.3	54.0	55.8
Maximum speed (mm/s)	Lead 40	1800						1660	1480	1300	1180	1080	980	880	820	740	680
	Lead 20	1200			1150	1000	950	830	740	650	590	540	490	440	410	370	340

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
MSCON	6 axes	256	Positioner control via field network		P56-1
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

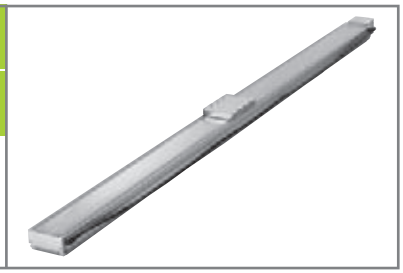
(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPDBCR series. Other specification values apply commonly to the ISDBCR and ISPDBCR.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

ISDBCR-LX-WA-400

Single-axis robot for cleanroom/Large, mid-support type/Actuator width: 150mm/400W Straight shape

ISPDBCR-LX-WA-400

Single-axis robot for cleanroom/Large, mid-support type/Actuator width: 150mm/400W Straight shape **High precision specification**



Model Specification Items

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISDBCR: Standard specification ISPDBCR: High precision specification	LX	WA: Battery-less Absolute specification	400: 400W	40 :40mm 20:20mm	1000: 1000mm 〜 2500: 2500mm (in 50 mm increments)	T2: SCON SSEL XSEL	N : None S : 3m M: 5m X□□: Spec.length	Please refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 100mm increments (mm)	Speed (mm/s)	Acceleration (Note 1) Horizontal (G) Rated	Acceleration (Note 1) Horizontal (G) Maximum	Acceleration (Note 1) Vertical (G) Rated	Acceleration (Note 1) Vertical (G) Maximum	Payload (Note 1) Horizontal (kg) Rated acceleration	Payload (Note 1) Horizontal (kg) Maximum acceleration	Payload (Note 1) Vertical (kg) Rated acceleration	Payload (Note 1) Vertical (kg) Maximum acceleration	Rated thrust (N)	Suction flow rate (N ℓ/min)
ISDBCR[ISPDBCR]-LX-WA-400-40- ① -T2- ② - ③	Battery-less Absolute	400	40	1000~2500	1~1800	0.4	Designed exclusively for horizontal use			40	Designed exclusively for horizontal use			169.6	180
ISDBCR[ISPDBCR]-LX-WA-400-20- ① -T2- ② - ③			20		1~1200	0.4				90				339.1	120

*In the above model numbers, ① indicates the stroke, ② indicates the cable length, and ③ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	P11	Creep sensor (alternatively on opposite side)	C (CL)	P11
Cable exit from the rear left	A1E	P11	Home limit switch (alternatively on opposite side)	L (LL)	P11
Cable exit from the right	A3S	P11	Non-motor side specification	NM	P12
Cable exit from the rear right	A3E	P11	Guide with ball retention mechanism	RT	P12
AQ seal (standard feature)	AQ	P11	Master axis specification (alt. sensor on oppsite side)	LM (LLM)	P12
Brake	B	P11	Slave axis specification	S	P12
-	-	-	High straightness, precision specification	ST	P13
Suction tube joint on oppositec side	VR	P12	Metal cable joint connector (standard feature)	EU	P12

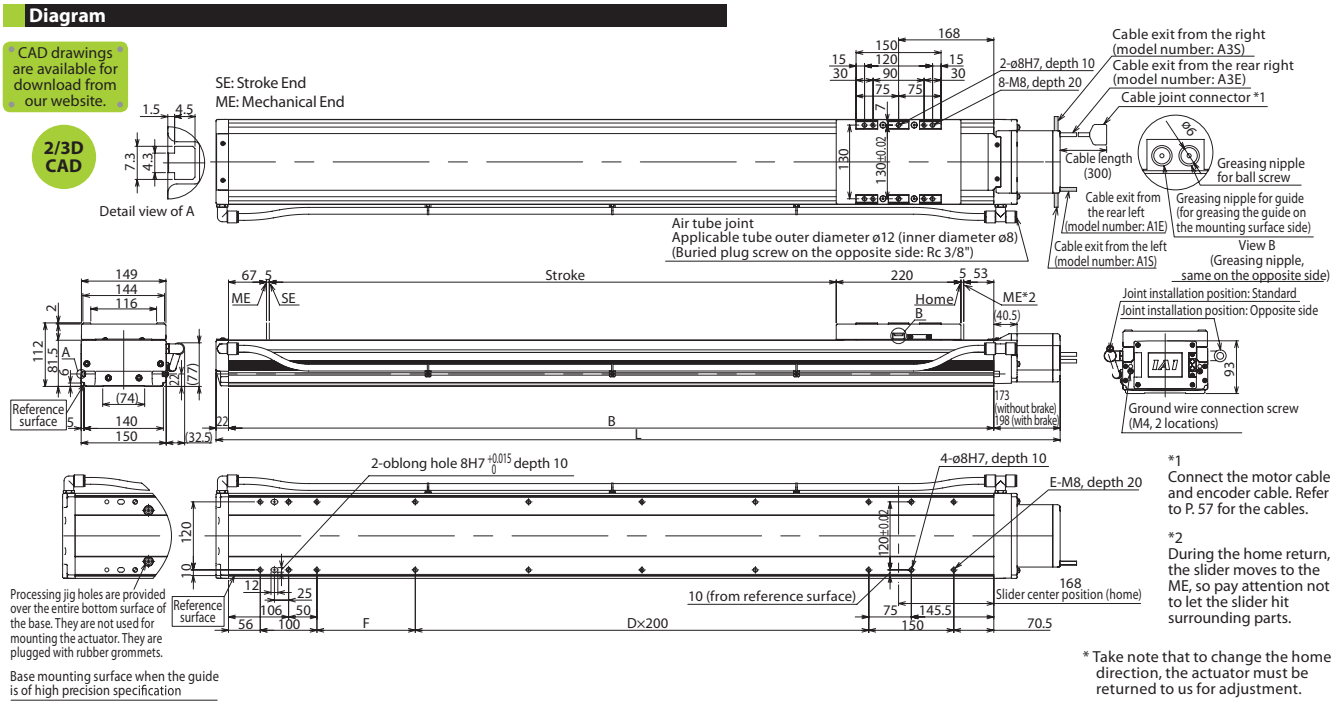
Common Specifications

Positioning repeatability (Note 2)	±0.01mm [±0.003mm]
Drive method (Note 3)	Ball screw ø20mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 123.0N•m Mb: 176.0N•m Mc: 291.0N•m
Overhang load length	Ma direction: 750mm max. Mb, Mc directions: 750mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T2: XSEL-P/Q, SSEL-CS, SCON-CB/CGB
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Grease	Low dust-raising grease (for ball screw and guide)
Cleanliness class	ISO class 4 (US FED STD class 10)
Suction tube joint	Quick connect joint, applicable tube outer diameter ø12mm

Diagram

CAD drawings are available for download from our website.

2/3D CAD



*1
Connect the motor cable and encoder cable. Refer to P. 57 for the cables.

*2
During the home return, the slider moves to the ME, so pay attention not to let the slider hit surrounding parts.

* Take note that to change the home direction, the actuator must be returned to us for adjustment.

■ Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.5kg. *The max. speed (mm/s) varies depending on the stroke. *Please contact IAI for interim values of 50 mm stroke increments.

Stroke		1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	without brake	1545	1645	1745	1845	1945	2045	2145	2245	2345	2445	2545	2645	2745	2845	2923	3045
	with brake	1570	1670	1770	1870	1970	2070	2170	2270	2370	2470	2570	2670	2770	2870	2970	3070
B		1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
D		4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
E		16	18	18	20	20	22	22	24	24	26	26	28	28	30	30	32
F		173.5	73.5	173.5	73.5	173.5	73.5	173.5	73.5	173.5	73.5	173.5	73.5	173.5	73.5	173.5	73.5
Mass (kg)		30.2	31.9	33.6	35.4	37.1	38.8	40.6	42.3	44.0	45.8	47.5	49.2	51.0	52.7	54.4	56.2
Maximum speed (mm/s)	Lead 40	1800						1660	1480	1300	1180	1080	980	880	820	740	680
	Lead 20	1200			1150	1000	950	830	740	650	590	540	490	440	410	370	340

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Max. number of positioning points	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	20000	Program control	Single/three-phase 230 VAC	P56-1
SSEL	2 axes			Single-phase 115/230 VAC	P56-1
-	-	-	-		-
SCON	1 axis	512 (768 for network spec.)	Positioner, pulse train control		P56-1

CAUTION

(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPDBCR series. Other specification values apply commonly to the ISDBCR and ISPDBCR.
(Note 5) When the traveling life is 10000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)

Explanation of Options

Double slider

Model number option W

This option has an additional free slider that is not connected to a ball screw or drive belt.
By doubling the slider, the moment and overhang load length can be increased.
* It cannot be used with the intermediate support (MXMX/LXMX/LXUWX/MX/LX). Please refer to the manual for more information regarding the directions of the allowable moment and overhang load length when using the double slider.

Slider roller specification

Model number option SR

Changes the slider structure of the standard slider type to the same roller structure of the cleanroom specification.
Changing to this will make the external view and dimensions of the slider cover the same as the cleanroom specification.

Anti-electrostatic specification

Model number option ESD

This is the anti-electrostatic specification. The structural parts of the actuator are given electroless nickel-plating to add conductivity, thereby preventing the actuator from being charged with electricity.

Applicable Controller

The IS(P)B/IS(P)DB/IS(P)DBCR with battery-less absolute encoder can be operated with the following controllers.
Select a controller that meets the specifications of your equipment. *For details, refer to the controller brochures or manuals.

	Controller series/type	SCON-CB/CGB-□WAI	MSCON-C-[1~6]-□WAI	SSEL-CS-[1~2]-□WAI	XSEL-P/Q-[1~6]-□WAI
Base specifications	External view				
	Features	• A positioner controller supporting up to 512 positioning points • For control modes, the pulse-train input mode is supported in addition to the positioner mode.	• A space-saving, low-cost 6-axis positioner controller • Can be connected directly to key field networks • Significantly shorter communication time than other controllers	• A program controller capable of 2-axis interpolation operation. • Offering excellent cost performance, although scalability is lower than XSEL controllers.	• A high-function controller capable of interpolation operation involving up to 6 axes. • Actuators of a total wattage of 2400W can be connected.
	Power capacity	60W/186VA 100W/282VA 200W/469VA 400W/968VA 750W/1569VA	60W/146VA 100W/238VA 200W/421VA (The above assumes a 1-axis specification.)	60W/198VA 100W/294VA 200W/481VA 400W/856VA 750W/1581VA (The above assumes a 1-axis specification.)	The specifications vary. Contact IAI for details.
	Input power supply	Single-phase 115 VAC Single-phase 230 VAC	Single-phase 115 VAC Single-phase 230 VAC	Single-phase 115 VAC Single-phase 230 VAC	Single-phase 230 VAC Three-phase 230 VAC
	Operating power-supply voltage range	±10%			
Control specifications	Total maximum output of connected axes (W)	200W (115-V power-supply specification) 750W (230-V power-supply specification)	450W (115-V power-supply specification) 900W (230-V power-supply specification)	400W (115-V power-supply specification) 800W (230-V power-supply specification)	1600W (single-phase, 230 V) 2400W (three-phase, 230 V)
	Maximum number of controlled axes	1 axis	6 axes	2 axes	6 axes
	Position detection method	Battery-less absolute encoder			
	Operation method	Positioner operation Pulse-train control	Positioner mode Direct input mode Remote I/O mode	Program operation Positioner operation (switchable)	Program operation
Program	Program language	–	–	Super SEL language	
	Number of programs	–	–	128	128
	Number of program steps	–	–	9999	9999
	Number of multi-task programs	–	–	8	16
	Number of positions	512 max.	256 max.	20000	20000
Communication	Standard inputs/outputs	16 input points/16 output points (NPN/PNP selectable)	– (only field network)	24 input points/8 output points (NPN/PNP selectable)	32 input points/16 output points (NPN/PNP selectable)
	Field network	DeviceNet, CC-Link, PROFIBUS-DP, CompoNet, EtherCAT, EtherNet/IP, PROFINET IO		DeviceNet, CC-Link, PROFIBUS-DP	DeviceNet, CC-Link, PROFIBUS-DP, Ethernet, EtherNet/IP