

ABAS04

Basic model

Single-axis robots

Slider type



Ordering method

ABAS04							EP-01			
Model	Lead	Shape	Motor specification	Stroke	Cable length	Cable entry location	Robot positioner	Driver: Power capacity	I/O	Battery
	12: 12 mm 6: 6 mm	S: Straight R: Right bending L: Left bending	S: Standard/With no brake BK: Standard/With brake BL: Battery-less absolute/With no brake BKBL: Battery-less absolute/With brake	50 to 800 (50mm pitch)	Note 1 R3: 3 m R5: 5 m R10: 10 m	R: From rear of motor F: From front of motor	EP-01	A10: 200W or less	EP: EtherNet/IP™ PT: PROFINET ES: EtherCAT NS: NPN CC: CC-Link	Note 2 B: With battery N: None

Note 1. The robot cable is flexible and resists bending.

Note 2. When the motor specification is the standard (S, BK), whether to use the battery needs to be selected.

Specifications

AC servo motor output	50 W	
Repeatability Note 1	±0.01 mm	
Deceleration mechanism	Shifting position ball screw φ 10 (C7 class)	
Stroke	50 mm to 800 mm (50mm pitch)	
Maximum speed Note 2	800 mm/sec	400 mm/sec
Ball screw lead	12 mm	6 mm
Maximum payload	Horizontal	12 kg
	Vertical	2 kg
Rated thrust	Horizontal	71 N
	Vertical	141 N
Maximum dimensions of cross section of main unit	W 44 mm × H 52 mm	
Overall length	Straight	ST + 277.5 mm
	Bending	ST + 196 mm
Position detector	Absolute encoder Battery-less absolute encoder	
Resolution	23 bits	
Using ambient temperature and humidity	0 to 40 °C, 35 to 80 %RH (non-condensing)	

Note 1. Positioning repeatability in one direction.

Note 2. When a moving distance is short and depending on an operation condition, it may not reach the maximum speed.

If the effective stroke exceeds 500 mm, the ball screw may resonate. (Critical speed)

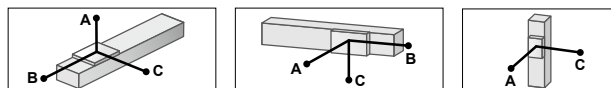
At this time, make the adjustment to decrease the speed while referring to the maximum speed shown in the table.

Note. See P.106 for acceleration/deceleration.

Controller

Controller	Operation method
EP-01	I/O point trace/Remote command

Allowable overhang Note



ABAS04-12

Horizontal installation (Unit: mm)				Wall installation (Unit: mm)				Vertical installation (Unit: mm)		
	A	B	C		A	B	C		A	C
2kg	1187	271	325	2kg	325	271	1187	1kg	534	534
8kg	473	62	77	8kg	77	62	473	2kg	265	265
12kg	431	41	53	12kg	53	41	431			

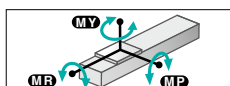
ABAS04-6

Horizontal installation (Unit: mm)				Wall installation (Unit: mm)				Vertical installation (Unit: mm)		
	A	B	C		A	B	C		A	C
4kg	1808	155	217	4kg	217	155	1808	1kg	639	639
12kg	801	47	65	12kg	65	47	801	3kg	208	208
20kg	546	25	35	20kg	35	25	546	5kg	122	122

Note. Distance from center of slider upper surface to carrier center-of-gravity at a guide service life of 10,000 km.

Note. Service life is calculated for 500mm stroke models.

Static loading moment



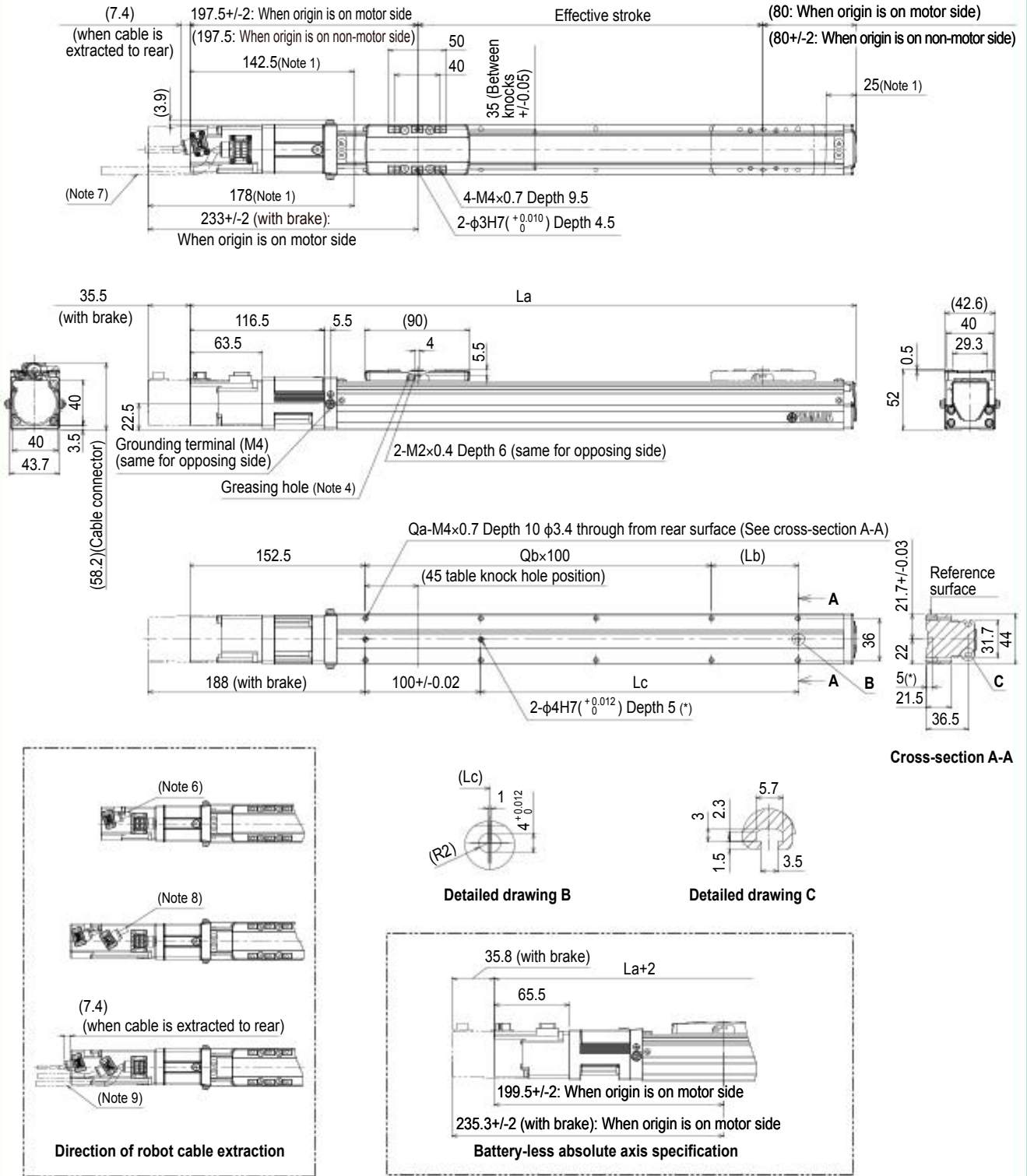
(Unit: N·m)		
MY	MP	MR
54	54	75

Access the website below.



► The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.12.

ABAS04 Straight type (S)

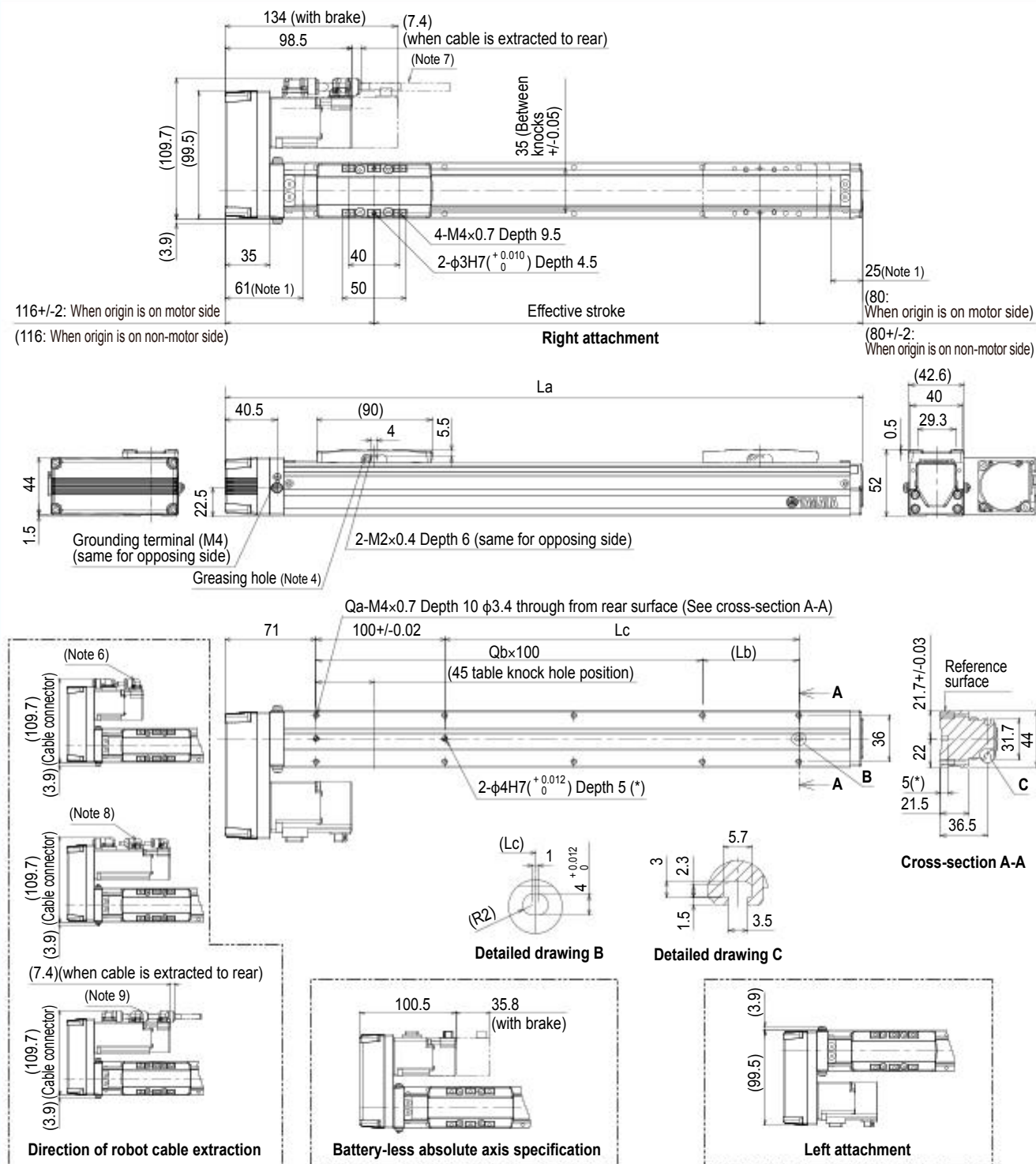


Note 1. Stop positions are determined by the mechanical stoppers at both ends.
 Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
 Note 3. For the installation through hole, the length under head << 30 mm or more >> is recommended for the hex socket head bolts <M3 x 0.5>. In the installation tap hole, the length under head << thickness of stand + 10 mm or less >> is recommended for the hex socket head bolts <M4 x 0.7> used to install the main unit.
 Note 4. Grease gun nozzle (recommended) (see P.143 for detail)
 Part number: KFU-M3861-00

Note 5. Weight without brake. The weight with the brake is 0.2 kg heavier than the value in the weight column.
 Note 6. The robot cable is extracted from the front.
 Note 7. The robot cable is extracted from the rear.
 Note 8. The robot cable (with brake) is extracted from the front.
 Note 9. The robot cable (with brake) is extracted from the rear.
 Note 10. The fixed minimum bending radius of the robot cable is R30.
 When using the robot cable as a flexible cable, use it with a minimum bending radius of R50 or more.

Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
La	327.5	377.5	427.5	477.5	527.5	577.5	627.5	677.5	727.5	777.5	827.5	877.5	927.5	977.5	1027.5	1077.5
Lb	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
Lc	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Qa	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
Qb	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
Weight (kg) Note 5	1.2	1.4	1.6	1.8	1.9	2.1	2.3	2.5	2.7	2.8	3	3.2	3.4	3.6	3.7	3.9
Maximum speed (mm/sec)	800										720	600	480	400	360	320
Lead 12	400										360	300	240	200	180	160
Lead 6	-										90%	75%	60%	50%	45%	40%
Speed setting	-										90%	75%	60%	50%	45%	40%

ABAS04 Bending type (R/L)



- Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
Note 3. For the installation through hole, the length under head << 30 mm or more >> is recommended for the hex socket head bolts <M3 x 0.5>. In the installation tap hole, the length under head << thickness of stand + 10 mm or less >> is recommended for the hex socket head bolts <M4 x 0.7> used to install the main unit.
Note 4. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFJ-M3861-00

- Note 5. Weight without brake. The weight with the brake is 0.2 kg heavier than the value in the weight column.
Note 6. The robot cable is extracted from the front.
Note 7. The robot cable is extracted from the rear.
Note 8. The robot cable (with brake) is extracted from the front.
Note 9. The robot cable (with brake) is extracted from the rear.
Note 10. The fixed minimum bending radius of the robot cable is R30.
When using the robot cable as a flexible cable, use it with a minimum bending radius of R50 or more.

Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
La	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996
Lb	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
Lc	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Qa	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
Qb	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
Weight (kg) Note 5	1.4	1.5	1.7	1.9	2.1	2.2	2.4	2.6	2.8	3	3.1	3.3	3.5	3.7	3.9	4
Maximum speed (mm/sec)	800										720	600	480	400	360	320
Speed setting	400										360	300	240	200	180	160
	-										90%	75%	60%	50%	45%	40%



Ordering method

ABAS05

Model	Lead	Shape	Motor specification	Stroke	Cable length	Cable entry location	Robot positioner	Driver: Power capacity	Regenerative unit	I/O	Battery
	20: 20 mm 10: 10 mm 5: 5 mm	S: Straight R: Right bending L: Left bending	S: Standard/With no brake BK: Standard/With brake BL: Battery-less absolute/With no brake BKBL: Battery-less absolute/With brake	50 to 800 (50mm pitch)	Note 1 R3: 3 m R5: 5 m R10: 10 m	R: From rear of motor F: From front of motor	EP-01	A10: 200W or less	Note 2 No entry: None R: With EP-RU	EP: EtherNet/IP™ PT: PROFINET ES: EtherCAT NS: NPN CC: CC-Link	Note 3 B: With battery N: None

Note 1. The robot cable is flexible and resists bending.

Note 2. When the actuator is used vertically, lead 5 or 10 is selected, and the stroke is 650 mm or more, the regenerative unit is needed.

Note 3. When the motor specification is the standard (S, BK), whether to use the battery needs to be selected.

Specifications

AC servo motor output		100 W	
Repeatability ^{Note 1}		±0.01 mm	
Deceleration mechanism		Shifting position ball screw φ 12 (C7 class)	
Stroke		50 mm to 800 mm (50 mm pitch)	
Maximum speed ^{Note 2}		1333 mm/sec	666 mm/sec
Ball screw lead		20 mm	10 mm
Maximum payload	Horizontal	12 kg	24 kg
	Vertical	3 kg	6 kg
Rated thrust		84 N	169 N
Maximum dimensions of cross section of main unit		W 54 mm × H 60 mm	
Overall length	Straight	ST + 295 mm	
	Bending	ST + 200 mm	
Position detector		Absolute encoder Battery-less absolute encoder	
Resolution		23 bits	
Using ambient temperature and humidity		0 to 40 °C, 35 to 80 %RH (non-condensing)	

Note 1. Positioning repeatability in one direction.

Note 2. When a moving distance is short and depending on an operation condition, it may not reach the maximum speed.

If the effective stroke exceeds 550 mm, the ball screw may resonate. (Critical speed)

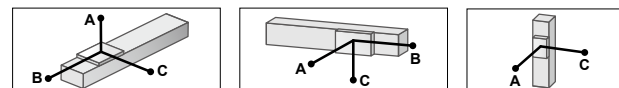
At this time, make the adjustment to decrease the speed while referring to the maximum speed shown in the table.

Note. See P.107 for acceleration/deceleration.

Controller

Controller	Operation method
EP-01	I/O point trace/Remote command

Allowable overhang ^{Note}



ABAS05-20

Horizontal installation (Unit: mm)				Wall installation (Unit: mm)				Vertical installation (Unit: mm)			
	A	B	C		A	B	C		A	C	
2kg	549	324	272	2kg	272	324	549	1kg	544	544	
8kg	155	73	65	8kg	65	73	155	2kg	276	276	
12kg	117	46	42	12kg	42	46	117	3kg	195	195	

ABAS05-10

Horizontal installation (Unit: mm)				Wall installation (Unit: mm)				Vertical installation (Unit: mm)			
	A	B	C		A	B	C		A	C	
5kg	769	178	213	5kg	213	178	769	2kg	443	443	
15kg	314	53	64	15kg	64	53	314	4kg	218	218	
24kg	216	29	36	24kg	36	29	216	6kg	142	142	

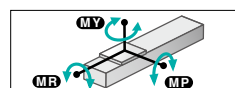
ABAS05-5

Horizontal installation (Unit: mm)				Wall installation (Unit: mm)				Vertical installation (Unit: mm)			
	A	B	C		A	B	C		A	C	
10kg	921	97	131	10kg	131	97	921	3kg	345	345	
25kg	459	33	45	25kg	45	33	459	8kg	124	124	
40kg	436	17	23	40kg	23	17	436	12kg	79	79	

Note. Distance from center of slider upper surface to carrier center-of-gravity at a guide service life of 10,000 km.

Note. Service life is calculated for 500mm stroke models.

Static loading moment



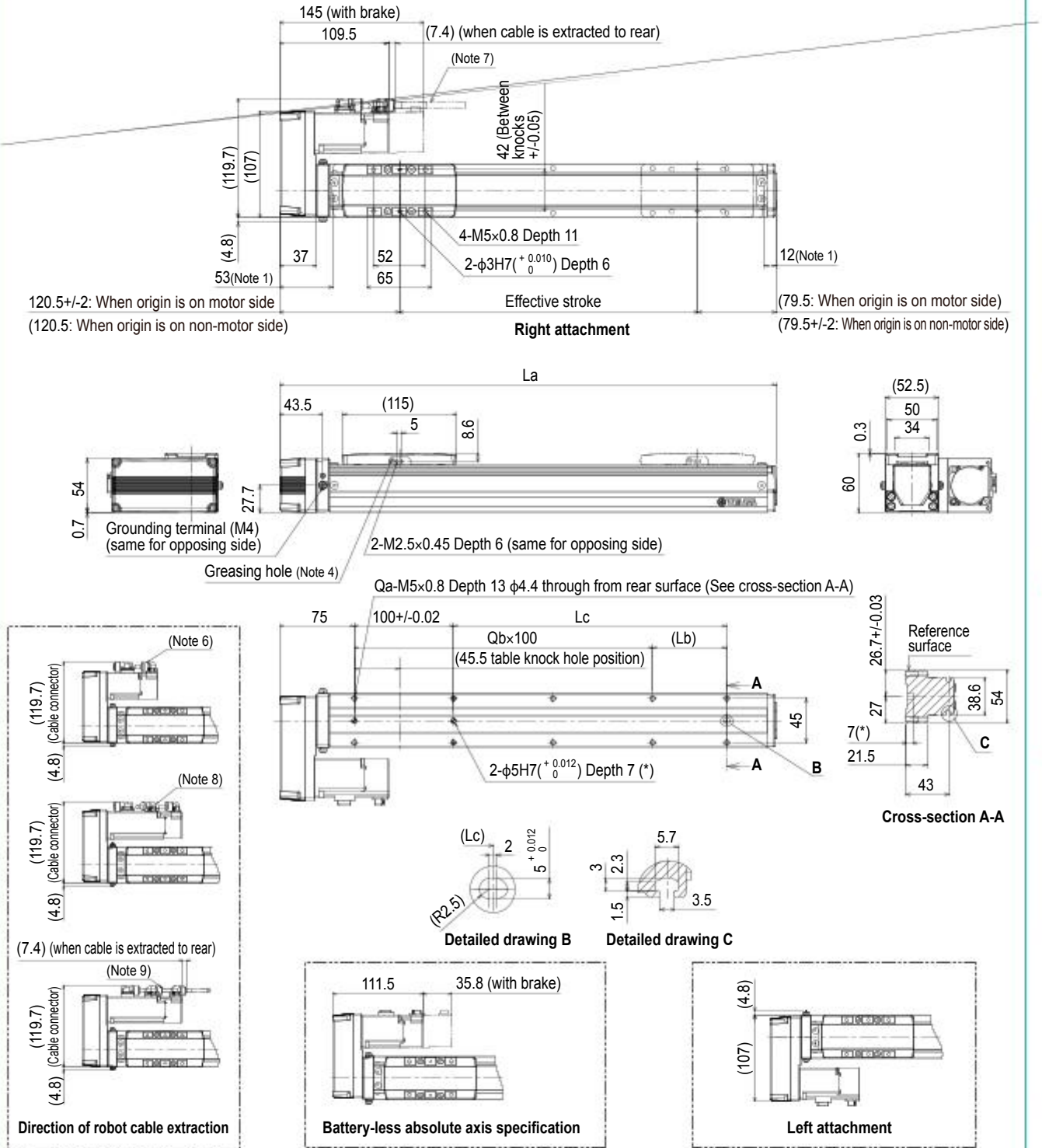
(Unit: N·m)		
MY	MP	MR
59	63	103

Access the website below.



► The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.12.

ABAS05 Bending type (R/L)



- Note 1. Stop positions are determined by the mechanical stoppers at both ends.
 Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
 Note 3. For the installation through hole, the length under head << 30 mm or more>> is recommended for the hex socket head bolts <M3 × 0.5>. In the installation tap hole, the length under head <<thickness of stand +10 mm or less>> is recommended for the hex socket head bolts <M4 × 0.7> used to install the main unit.
 Note 4. Grease gun nozzle (recommended) (see P.143 for detail)
 Part number: KFU-M3861-00

- Note 5. Weight without brake. The weight with the brake is 0.2 kg heavier than the value in the weight column.
 Note 6. The robot cable is extracted from the front.
 Note 7. The robot cable is extracted from the rear.
 Note 8. The robot cable (with brake) is extracted from the front.
 Note 9. The robot cable (with brake) is extracted from the rear.
 Note 10. The fixed minimum bending radius of the robot cable is R30.
 When using the robot cable as a flexible cable, use it with a minimum bending radius of R50 or more.

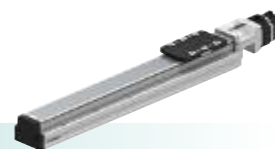
Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
La	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
Lb	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
Lc	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Qa	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
Qb	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
Weight (kg) Note 5	2.1	2.2	2.4	2.6	2.8	3	3	3.2	3.3	3.4	3.6	3.7	3.9	4	4.2	4.5
Maximum speed (mm/sec)																
Lead 20																
Lead 10																
Lead 5																
Speed setting																

ABAS08

Basic model

Single-axis robots

Slider type



Ordering method

Model	Lead	Shape	Motor specification	Stroke	Cable length	Cable entry location	Robot positioner	Driver: Power capacity	Regenerative unit	I/O	Battery
ABAS08	20: 20 mm 10: 10 mm 5: 5 mm	S: Straight R: Right bending L: Left bending	S: Standard/With no brake BK: Standard/With brake BL: Battery-less absolute/With no brake BKBL: Battery-less absolute/With brake	50 to 1100 (50mm pitch)	Note 1 R3: 3 m R5: 5 m R10: 10 m	R: From rear of motor F: From front of motor	EP-01	A10: 200W or less	Note 2 No entry: None R: With EP-RU	EP: EtherNet/IP™ PT: PROFINET ES: EtherCAT NS: NPN CC: CC-Link	Note 3 B: With battery N: None

Note 1. The robot cable is flexible and resists bending.

Note 2. When the actuator is used vertically and the stroke of lead 5 or 20 is 450 mm or more or the stroke of lead 10 is 150 mm or more, the regenerative unit is needed.

When the actuator is used horizontally and the stroke of lead 20 is 250 to 750 mm, the regenerative unit is needed.

Note 3. When the motor specification is the standard (S, BK), whether to use the battery needs to be selected.

Specifications

AC servo motor output		200 W		
Repeatability ^{Note 1}		±0.01 mm		
Deceleration mechanism		Shifting position ball screw φ 16 (C7 class)		
Stroke		50 mm to 1100 mm (50 mm pitch)		
Maximum speed ^{Note 2}		1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		20 mm	10 mm	5 mm
Maximum payload	Horizontal	40 kg	80 kg	100 kg
	Vertical	8 kg	20 kg	30 kg
Rated thrust		174 N	341 N	683 N
Maximum dimensions of cross section of main unit		W 82 mm × H 78 mm		
Overall length	Straight	ST + 353 mm		
	Bending	ST + 264.5 mm		
Position detector		Absolute encoder Battery-less absolute encoder		
Resolution		23 bits		
Using ambient temperature and humidity		0 to 40 °C, 35 to 80 %RH (non-condensing)		

Note 1. Positioning repeatability in one direction.

Note 2. When a moving distance is short and depending on an operation condition, it may not reach the maximum speed.

If the effective stroke exceeds 650 mm, the ball screw may resonate. (Critical speed)

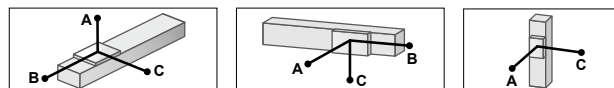
At this time, make the adjustment to decrease the speed while referring to the maximum speed shown in the table.

Note. See P.109 for acceleration/deceleration.

Controller

Controller	Operation method
EP-01	I/O point trace/Remote command

Allowable overhang^{Note}



ABAS08-20

Horizontal installation (Unit: mm)				Wall installation (Unit: mm)				Vertical installation (Unit: mm)			
	A	B	C		A	B	C		A	C	
15kg	356	131	146	15kg	146	131	356	3kg	634	634	
25kg	278	73	86	25kg	86	73	278	6kg	321	321	
40kg	517	54	76	40kg	76	54	517	8kg	240	240	

ABAS08-10

Horizontal installation (Unit: mm)				Wall installation (Unit: mm)				Vertical installation (Unit: mm)			
	A	B	C		A	B	C		A	C	
30kg	465	83	120	30kg	120	83	465	5kg	551	551	
50kg	341	44	65	50kg	65	44	341	10kg	270	270	
80kg	228	22	34	80kg	34	22	228	20kg	129	129	

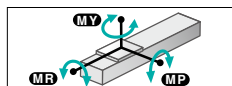
ABAS08-5

Horizontal installation (Unit: mm)				Wall installation (Unit: mm)				Vertical installation (Unit: mm)			
	A	B	C		A	B	C		A	C	
30kg	1604	95	153	30kg	153	95	1604	10kg	312	312	
50kg	1035	52	83	50kg	83	52	1035	20kg	149	149	
80kg	719	27	44	80kg	44	27	719	30kg	95	95	
100kg	608	19	31	100kg	31	19	608				

Note. Distance from center of slider upper surface to carrier center-of-gravity at a guide service life of 10,000 km.

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

Static loading moment



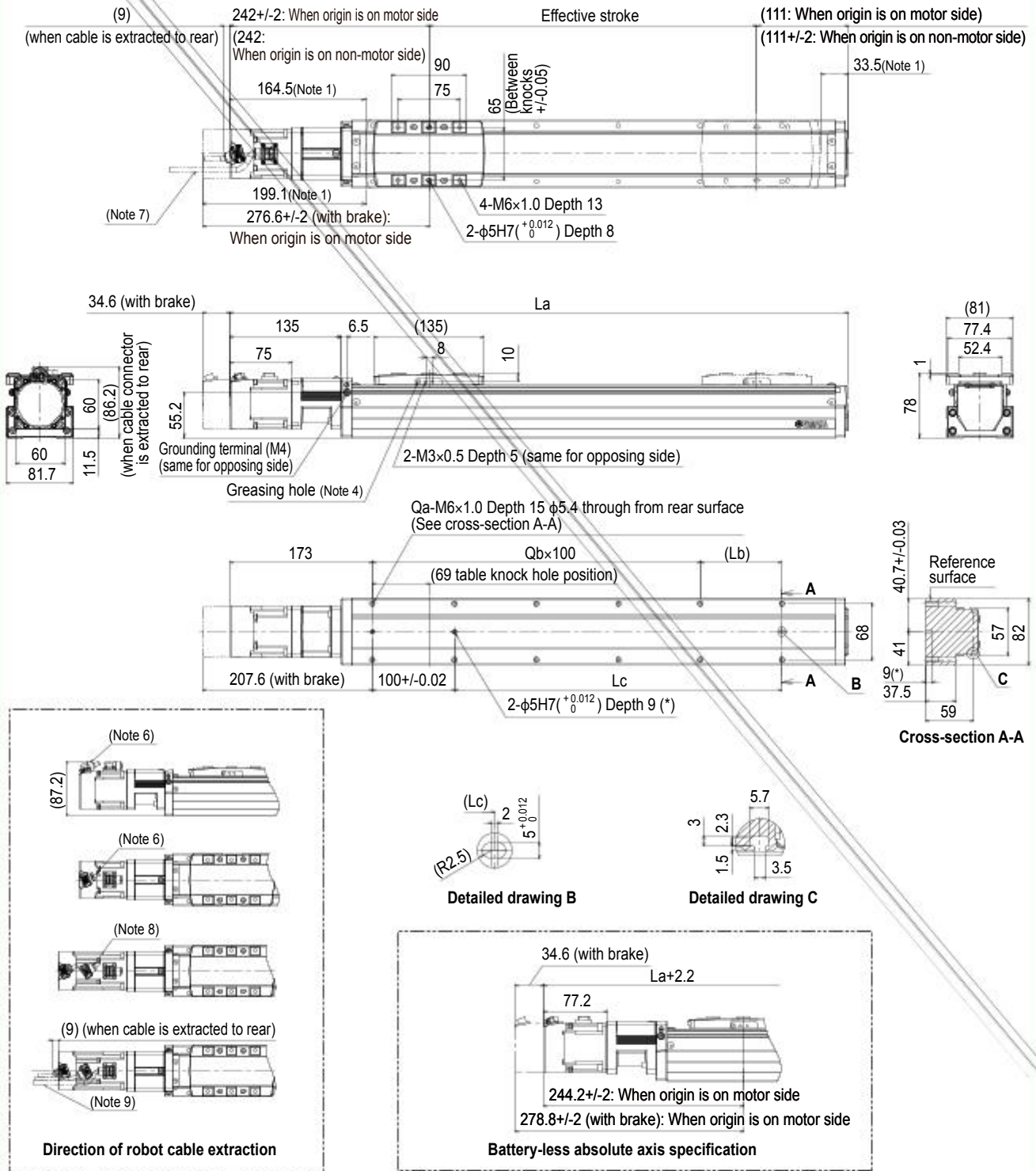
(Unit: N-m)		
MY	MP	MR
221	309	343

Access the website below.



► The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.12.

ABAS08 Straight type (S)

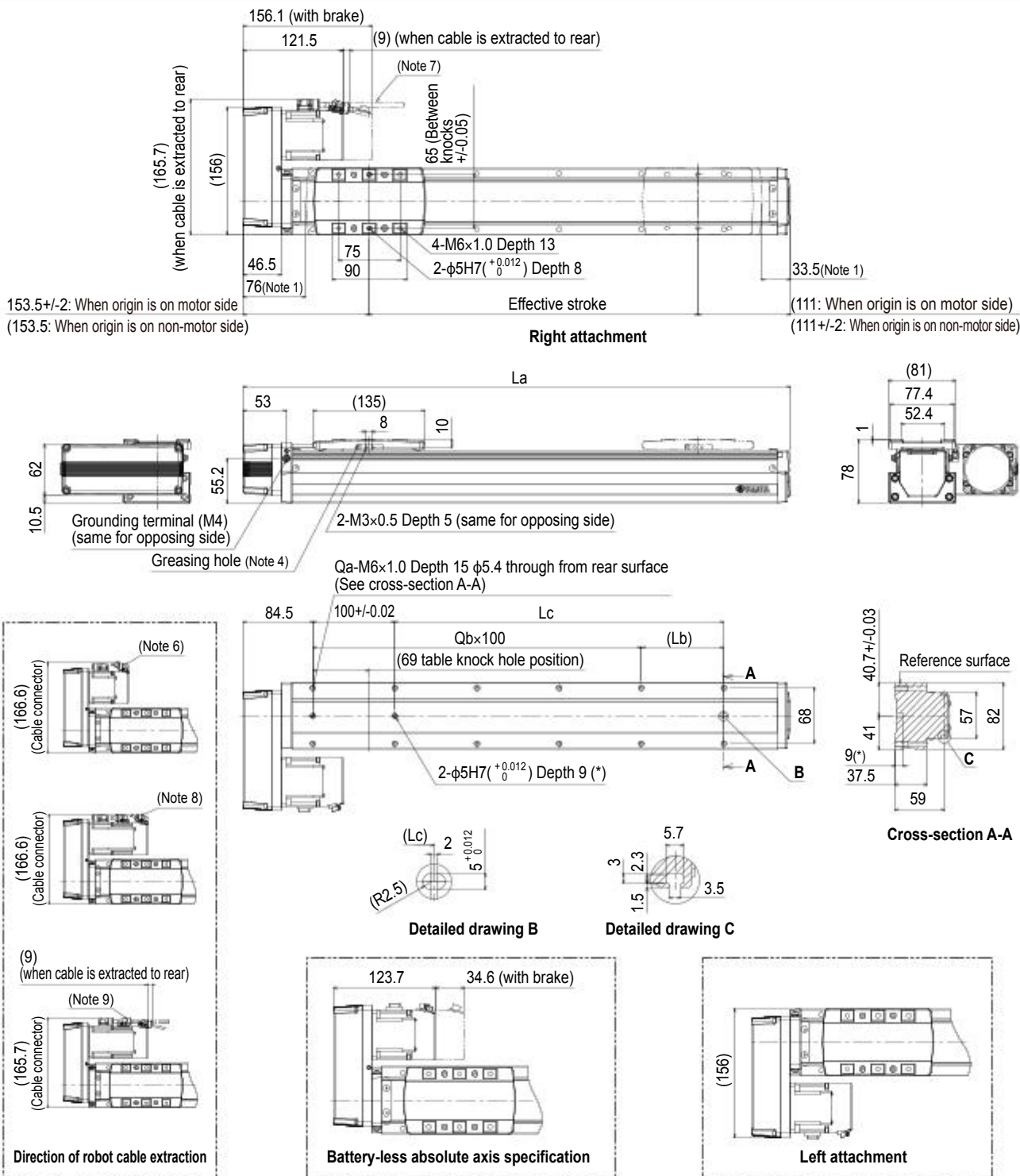


Note 1. Stop positions are determined by the mechanical stoppers at both ends.
 Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
 Note 3. For the installation through hole, the length under head << 45 mm or more>> is recommended for the hex socket head bolts <M5 × 0.8>. In the installation tap hole, the length under head << thickness of stand +15 mm or less>> is recommended for the hex socket head bolts <M6 × 1.0> used to install the main unit.
 Note 4. Grease gun nozzle (recommended) (see P.143 for detail)
 Part number: KFU-M3861-00

Note 5. Weight without brake. The weight with the brake is 0.4 kg heavier than the value in the weight column.
 Note 6. The robot cable is extracted from the front.
 Note 7. The robot cable is extracted from the rear.
 Note 8. The robot cable (with brake) is extracted from the front.
 Note 9. The robot cable (with brake) is extracted from the rear.
 Note 10. The fixed minimum bending radius of the robot cable is R30.
 When using the robot cable as a flexible cable, use it with a minimum bending radius of R50 or more.

Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
La	403	453	503	553	603	653	703	753	803	853	903	953	1003	1053	1103	1153	1203	1253	1303	1353	1403	1453
Lb	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Lc	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Qa	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	22	22	24	24	26	26	26
Qb	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
Weight (kg) Note 5	4.5	4.9	5.3	5.6	6	6.3	6.6	7	7.3	7.6	8	8.3	8.7	9	9.3	9.6	10	10.2	10.6	10.9	11.3	11.7
Maximum speed (mm/sec)	1200										1020											
Lead 20											900											
Lead 10											780											
Lead 5											660											
Speed setting											600											
											510											
											255											
											85%											

ABAS08 Bending type (R/L)



- Note 1. Stop positions are determined by the mechanical stoppers at both ends.
- Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
- Note 3. For the installation through hole, the length under head ≤ 45 mm or more is recommended for the hex socket head bolts $\leq M5 \times 0.8$. In the installation tap hole, the length under head $\leq$ thickness of stand ± 15 mm or less is recommended for the hex socket head bolts $\leq M6 \times 1.0$ used to install the main unit.
- Note 4. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00

- Note 5. Weight without brake. The weight with the brake is 0.4 kg heavier than the value in the weight column.
- Note 6. The robot cable is extracted from the front.
- Note 7. The robot cable is extracted from the rear.
- Note 8. The robot cable (with brake) is extracted from the front.
- Note 9. The robot cable (with brake) is extracted from the rear.
- Note 10. The fixed minimum bending radius of the robot cable is R30.
When using the robot cable as a flexible cable, use it with a minimum bending radius of R50 or more.

Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
La	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5
Lb	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Lc	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Qa	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
Qb	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
Weight (kg) Note 5	4.9	5.3	5.7	6	6.4	6.7	7	7.4	7.7	8	8.4	8.7	9.1	9.4	9.7	10	10.4	10.6	11	11.3	11.7	12.1
Maximum speed (mm/sec)	Lead 20										1020											
	Lead 10										660											
	Lead 5										300											
Speed setting											-											
											85%											

ABAS12/ABAS12H

Basic model

Single-axis robots

Slider type

Slim type



Ordering method

Model	Lead	Shape	Motor specification	Stroke	Cable length	Cable entry location	Robot positioner	Driver: Power capacity	Regenerative unit	I/O	Battery
ABAS12: 200W	32: 32 mm	S: Straight	S: Standard/With no brake	50 to 1250 (50mm pitch)	R3: 3 m	R: From rear of motor	EP-01	A10: 200W or less	No entry: None	EP: EtherNet/IP™ PT: PROFINET ES: EtherCAT NS: NPN CC: CC-Link	B: With battery
ABAS12H: 400W	20: 20 mm 10: 10 mm 5: 5 mm	R: Right bending L: Left bending	BK: Standard/With brake BL: Battery-less absolute/With no brake BKBL: Battery-less absolute/With brake		R5: 5 m R10: 10 m	F: From front of motor		A30: 400W/750W	R: With EP-RU		N: None

Note 1. The robot cable is flexible and resists bending.

Note 2. [For ABAS12]

When the actuator is used vertically and the stroke of lead 5, 10, or 20 is 150 mm or more or the stroke of lead 32 is 300 to 750 mm, the regenerative unit is needed.

When the actuator is used horizontally and the stroke of lead 10 or 20 is 250 to 750 mm or the stroke of lead 32 is 400 to 750 mm, the regenerative unit is needed.

[For ABAS12H]

When the actuator is used vertically and the stroke of lead 5, 10, or 20 is 300 mm or more or the stroke of lead 32 is 300 to 750 mm, the regenerative unit is needed.

Note 3. When the motor specification is the standard (S, BK), whether to use the battery needs to be selected.

ABAS12 (200W)

Specifications

AC servo motor output	200 W
Repeatability ^{Note 1}	+/-0.01 mm
Deceleration mechanism	Shifting position ball screw φ 16 (C7 class)
Stroke	50 mm to 1250 mm (50 mm pitch)
Maximum speed ^{Note 2}	1800 mm/sec 1200 mm/sec 600 mm/sec 300 mm/sec
Ball screw lead	32 mm 20 mm 10 mm 5 mm
Maximum payload	Horizontal: 20 kg, 40 kg, 80 kg, 100 kg Vertical: 3 kg, 8 kg, 20 kg, 30 kg
Rated thrust	105 N, 170 N, 341 N, 683 N
Maximum dimensions of cross section of main unit	W 120 mm × H 76 mm
Overall length	Straight: ST + 369 mm Bending: ST + 270.5 mm
Position detector	Absolute encoder Battery-less absolute encoder
Resolution	23 bits
Using ambient temperature and humidity	0 to 40 °C, 35 to 80 %RH (non-condensing)

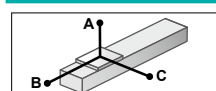
Note 1. Positioning repeatability in one direction.

Note 2. When a moving distance is short and depending on an operation condition, it may not reach the maximum speed.

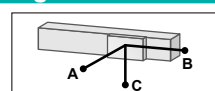
If the effective stroke exceeds 600 mm, the ball screw may resonate. (Critical speed)
At this time, make the adjustment to decrease the speed while referring to the maximum speed shown in the table.

Note. See P.111 for acceleration/deceleration.

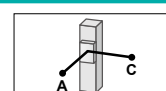
Allowable overhang^{Note}



ABAS12-32 Horizontal installation (Unit: mm)			
	A	B	C
5kg	2079	1694	1224
10kg	1135	834	627
20kg	842	422	362



ABAS12-32 Wall installation (Unit: mm)			
	A	B	C
5kg	1224	1694	2079
10kg	627	834	1135
20kg	362	422	842



ABAS12-32 Vertical installation (Unit: mm)		
	A	C
1kg	6201	6201
3kg	2057	2057

Static loading moment

(Unit: N-m)		
MY	MP	MR
573	606	606

Controller

Controller	Operation method
EP-01	I/O point trace/ Remote command

ABAS12H (400W)

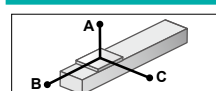
Specifications

AC servo motor output	400 W
Ball screw lead	32 mm, 20 mm, 10 mm, 5 mm
Maximum payload	Horizontal: 35 kg, 50 kg, 95 kg, 115 kg Vertical: 8 kg, 15 kg, 25 kg, 40 kg
Rated thrust	218 N, 339 N, 678 N, 1360 N
Overall length	Straight: ST + 385 mm Bending: ST + 270.5 mm

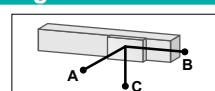
Note. See P.113 for acceleration/deceleration.

Note. The specifications and static loading moment, etc. not described here are common to ABAS12.

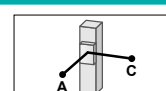
Allowable overhang^{Note}



ABAS12H-32 Horizontal installation (Unit: mm)			
	A	B	C
10kg	1135	834	627
20kg	842	422	362
35kg	925	286	294



ABAS12H-32 Wall installation (Unit: mm)			
	A	B	C
10kg	627	834	1135
20kg	362	422	842
35kg	294	286	925



ABAS12H-32 Vertical installation (Unit: mm)		
	A	C
3kg	2057	2057
5kg	1228	1228
8kg	762	833

ABAS12H-20 Horizontal installation (Unit: mm)			
	A	B	C
15kg	826	548	427
30kg	485	263	218
50kg	433	172	162

ABAS12H-20 Wall installation (Unit: mm)			
	A	B	C
15kg	427	548	826
30kg	218	263	485
50kg	162	172	433

ABAS12H-20 Vertical installation (Unit: mm)		
	A	C
5kg	1315	1315
10kg	672	672
15kg	522	660

ABAS12H-10 Horizontal installation (Unit: mm)			
	A	B	C
30kg	528	270	230
60kg	665	171	185
95kg	1347	132	173

ABAS12H-10 Wall installation (Unit: mm)			
	A	B	C
30kg	230	270	528
60kg	185	171	665
95kg	173	132	1347

ABAS12H-10 Vertical installation (Unit: mm)		
	A	C
5kg	1933	1933
15kg	660	660
25kg	409	541

ABAS12H-5 Horizontal installation (Unit: mm)			
	A	B	C
30kg	2476	430	513
60kg	1672	215	270
90kg	1474	141	186
115kg	1378	109	146

ABAS12H-5 Wall installation (Unit: mm)			
	A	B	C
30kg	513	430	2476
60kg	270	215	1672
90kg	186	141	1474
115kg	146	109	1378

ABAS12H-5 Vertical installation (Unit: mm)		
	A	C
15kg	885	885
25kg	541	541
40kg	350	350

Note. Distance from center of slider upper surface to carrier center-of-gravity at guide service life of 10,000 km.

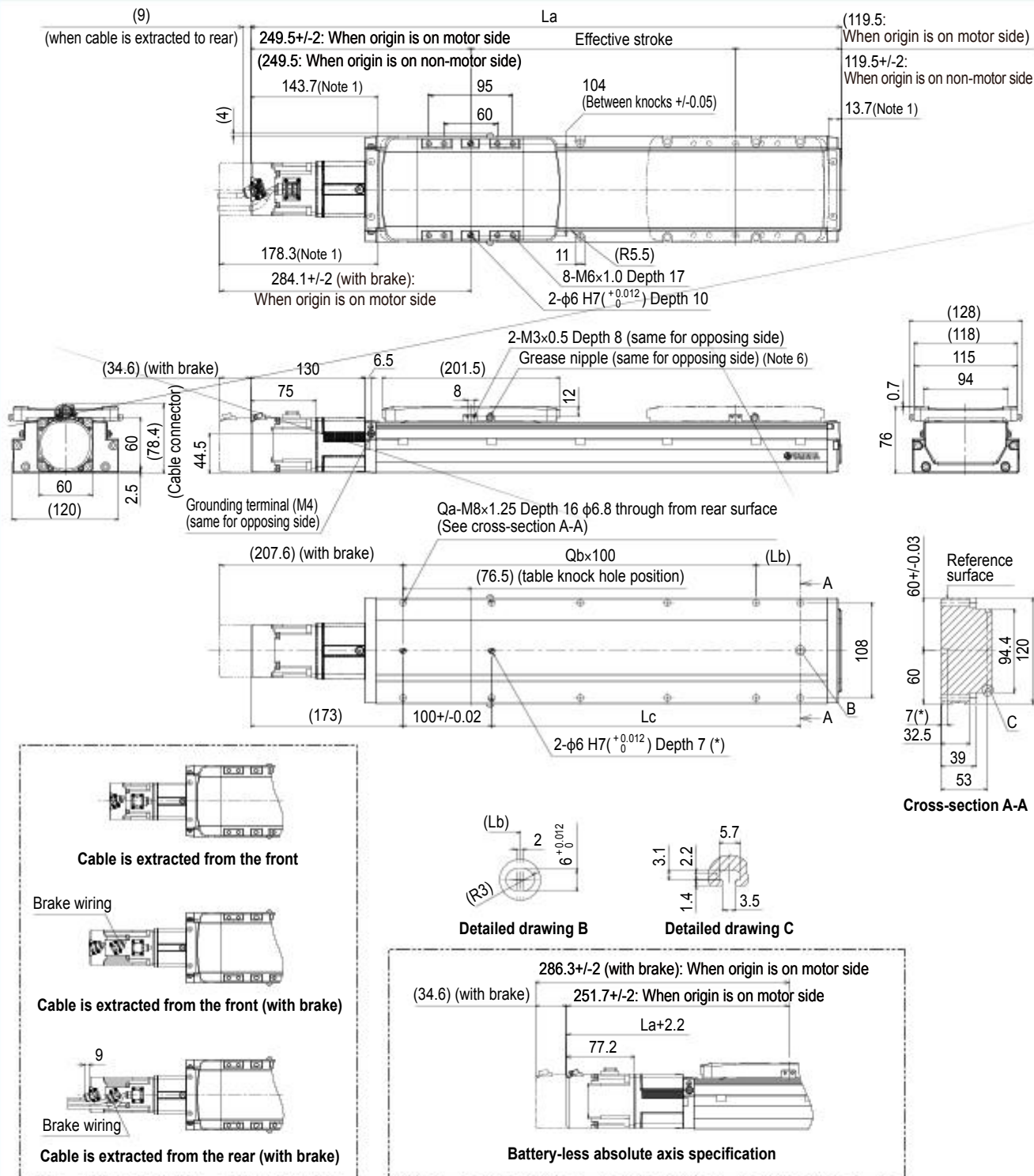
Note. Service life is calculated for 600mm stroke models.

Access the website below.



► The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.12.

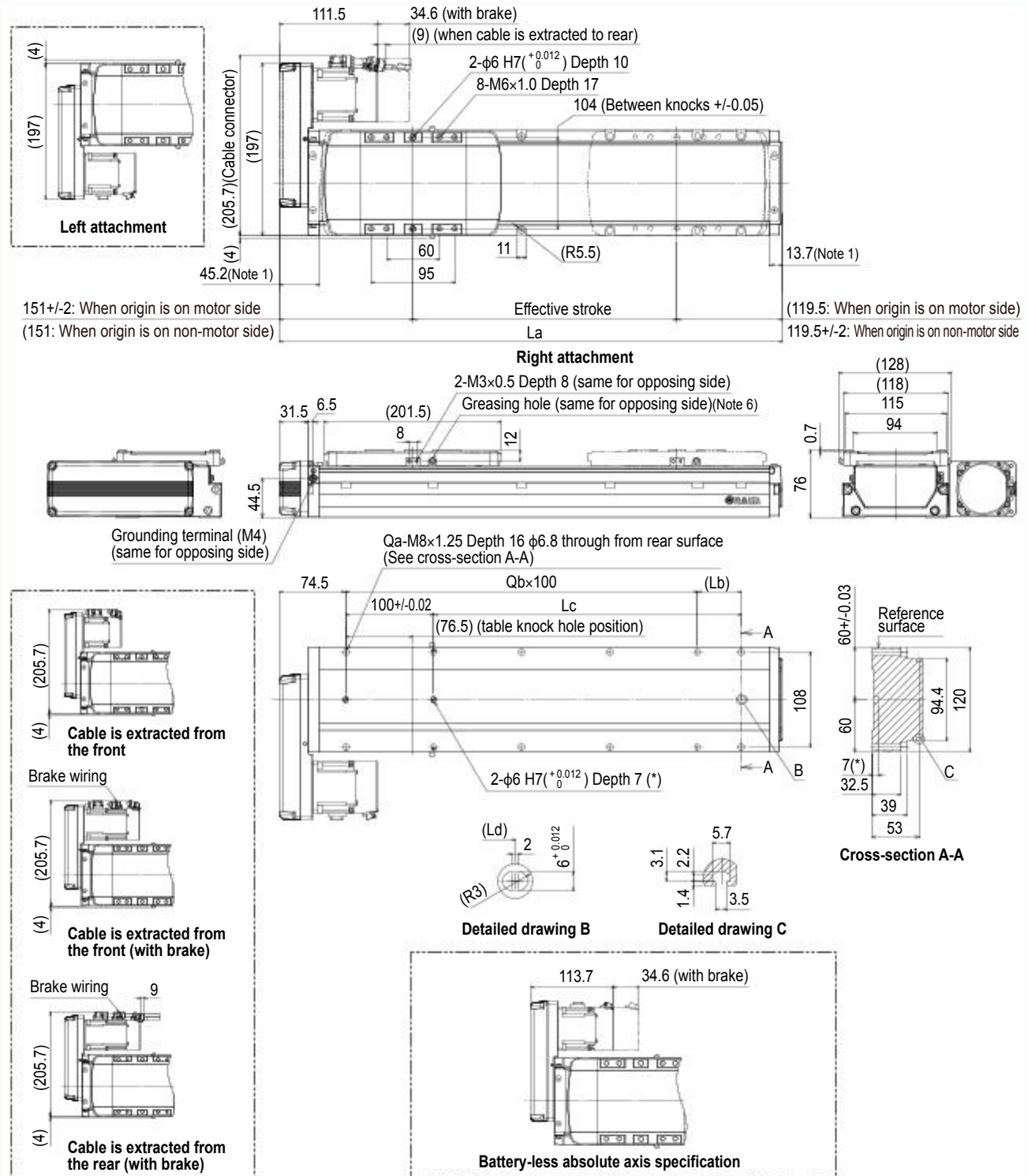
ABAS12 Straight type (S)



- Note 1. Stop positions are determined by the mechanical stoppers at both ends.
 Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
 Note 3. For the installation through hole, the length under head << 45 mm or more >> is recommended for the hex socket head bolts <M6 × 1.0>. In the installation tap hole, the length under head << thickness of stand +16 mm or less >> is recommended for the hex socket head bolts <M8 × 1.25> used to install the main unit.
 Note 4. The weight with the brake is 0.4 kg heavier than the value in the weight column.
 Note 5. The minimum bending radius of the robot cable is R30 on the fixed side or R50 on the movable side. The cable extraction direction may vary depending on the specifications.
 Note 6. Grease gun nozzle (recommended) (see P.143 for detail)

Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
La	419	469	519	569	619	669	719	769	819	869	919	969	1019	1069	1119	1169	1219	1269	1319	1369	1419	1469	1519	1569	1619
Lb	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Lc	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
Qa	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
Qb	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
Weight (kg) Note 4	5.3	5.7	6.1	6.5	6.9	7.3	7.7	8.1	8.5	8.9	9.4	9.8	10.2	10.7	11.1	11.5	12	12.4	12.9	13.3	13.7	14.2	14.6	15.1	15.5
Lead 32	1800											1620	1440	1260	1080	990	810	720	630	630	540	450	360	360	
Lead 20	1200											1080	960	840	720	660	540	480	420	360	300	240	240		
Lead 10	600											540	480	420	360	330	270	240	210	180	150	120	120		
Lead 5	300											270	240	210	180	165	135	120	105	90	75	60	60		
Speed setting	-											90%	80%	70%	60%	55%	45%	40%	35%	35%	30%	25%	20%	20%	

ABAS12 Bending type (R/L)



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

Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)

Note 3. For the installation through hole, the length under head << 45 mm or more >> is recommended for the hex socket head bolts <M6 × 1.0>. In the installation tap hole, the length under head << thickness of stand + 16 mm or less >> is recommended for the hex socket head bolts <M8 × 1.25> used to install the main unit.

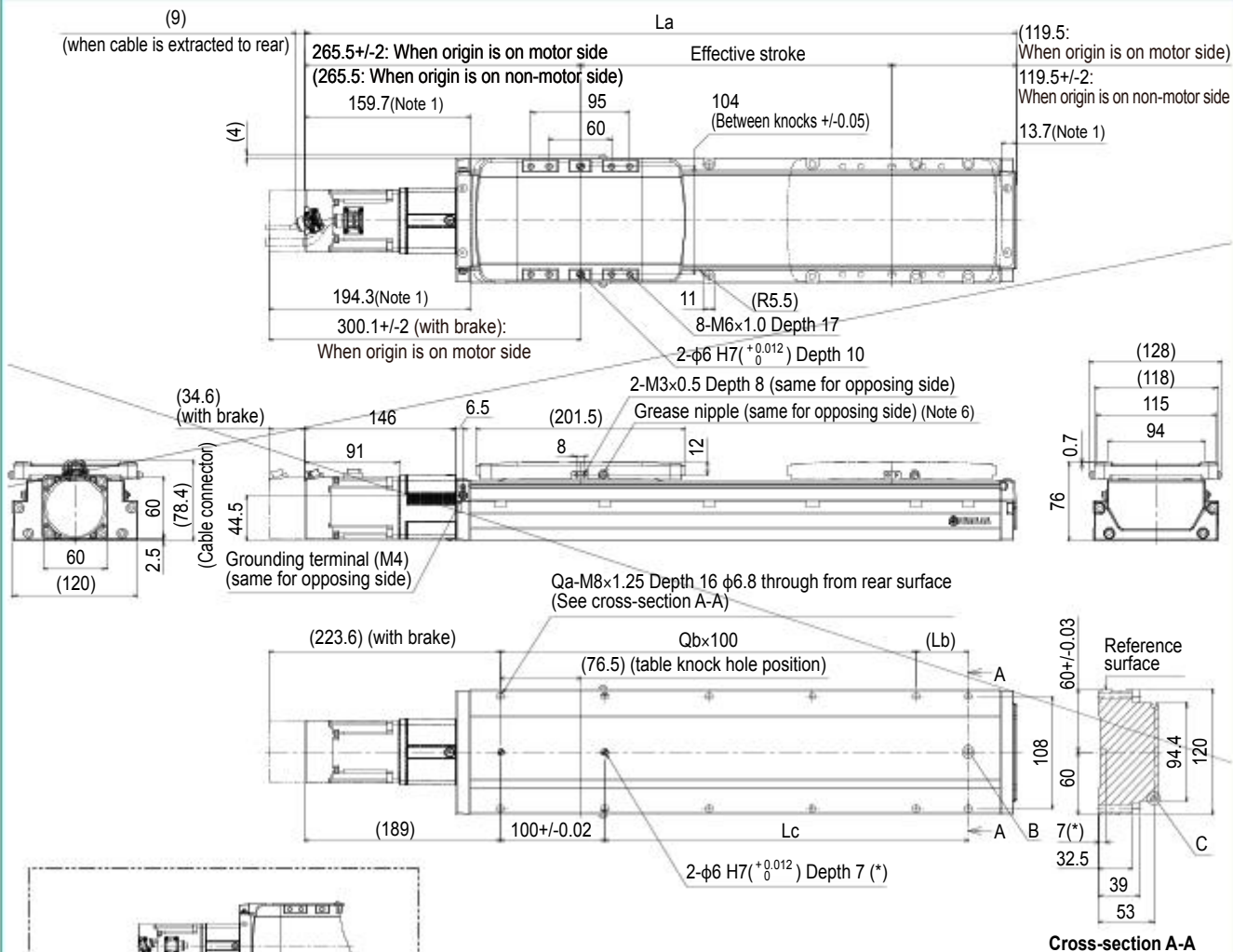
Note 4. The weight with the brake is 0.4 kg heavier than the value in the weight column.

Note 5. The minimum bending radius of the robot cable is R30 on the fixed side or R50 on the movable side. The cable extraction direction may vary depending on the specifications.

Note 6. Grease gun nozzle (recommended) (see P.143 for detail)

Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
La	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5	1020.5	1070.5	1120.5	1170.5	1220.5	1270.5	1320.5	1370.5	1420.5	1470.5	1520.5
Lb	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Lc	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
Qa	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
Qb	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
Weight (kg) Note 4	5.3	5.7	6.1	6.5	6.9	7.3	7.7	8.1	8.5	9	9.4	9.9	10.3	10.7	11.2	11.6	12	12.5	12.9	13.4	13.8	14.2	14.7	15.1	15.6
Maximum speed (mm/sec)	Lead 32						1800							1620	1440	1260	1080	990	810	720	630	630	540	450	360
	Lead 20						1200							1080	960	840	720	660	540	480	420	420	360	300	240
	Lead 10						600							540	480	420	360	330	270	240	210	210	180	150	120
	Lead 5						300							270	240	210	180	165	135	120	105	105	90	75	60
	Speed setting						-							90%	80%	70%	60%	55%	45%	40%	35%	35%	30%	25%	20%

ABAS12H Straight type (S)



Cable is extracted from the front

Brake wiring

Cable is extracted from the front (with brake)

Brake wiring

Cable is extracted from the rear (with brake)

Detailed drawing B

Detailed drawing C

Battery-less absolute axis specification

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

Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)

Note 3. For the installation through hole, the length under head << 45 mm or more >> is recommended for the hex socket head bolts <M6 × 1.0>. In the installation tap hole, the length under head << thickness of stand +16 mm or less >> is recommended for the hex socket head bolts <M8 × 1.25> used to install the main unit.

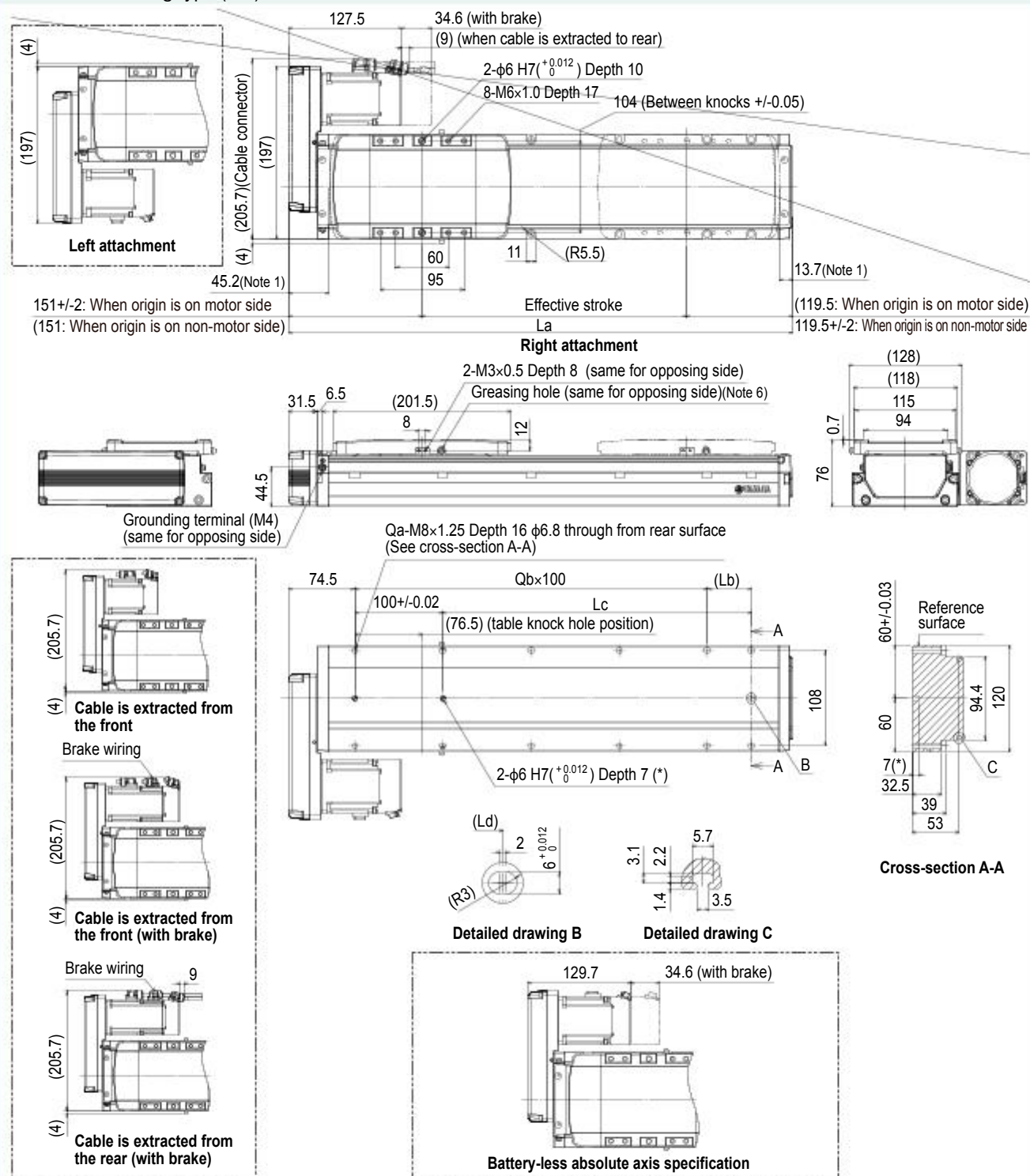
Note 4. The weight with the brake is 0.4 kg heavier than the value in the weight column.

Note 5. The minimum bending radius of the robot cable is R30 on the fixed side or R50 on the movable side. The cable extraction direction may vary depending on the specifications.

Note 6. Grease gun nozzle (recommended) (see P.143 for detail)

Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
La	435	485	535	585	635	685	735	785	835	885	935	985	1035	1085	1135	1185	1235	1285	1335	1385	1435	1485	1535	1585	1635
Lb	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Lc	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
Qa	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	24	24	26	26	28	28	30	30	30
Qb	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
Weight (kg) Note 4	5.6	6	6.4	6.8	7.2	7.6	8	8.4	8.8	9.2	9.7	10.1	10.5	11	11.4	11.8	12.3	12.7	13.2	13.6	14	14.5	14.9	15.4	15.8
Lead 32	1800											1620	1440	1260	1080	990	810	720	630	630	540	450	360	360	
Lead 20	1200											1080	960	840	720	660	540	480	420	360	300	240	240		
Lead 10	600											540	480	420	360	330	270	240	210	180	150	120	120		
Lead 5	300											270	240	210	180	165	135	120	105	90	75	60	60		
Speed setting	-											90%	80%	70%	60%	55%	45%	40%	35%	35%	30%	25%	20%	20%	

ABAS12H Bending type (R/L)



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

Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)

Note 3. For the installation through hole, the length under head << 45 mm or more >> is recommended for the hex socket head bolts <M6 × 1.0>. In the installation tap hole, the length under head << thickness of stand + 16 mm or less >> is recommended for the hex socket head bolts <M8 × 1.25> used to install the main unit.

Note 4. The weight with the brake is 0.4 kg heavier than the value in the weight column.

Note 5. The minimum bending radius of the robot cable is R30 on the fixed side or R50 on the movable side. The cable extraction direction may vary depending on the specifications.

Note 6. Grease gun nozzle (recommended) (see P.143 for detail)

Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
La	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5	1020.5	1070.5	1120.5	1170.5	1220.5	1270.5	1320.5	1370.5	1420.5	1470.5	1520.5
Lb	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Lc	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
Qa	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
Qb	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
Weight (kg) Note 4	5.6	6	6.4	6.8	7.2	7.6	8	8.4	8.8	9.3	9.7	10.2	10.6	11	11.5	11.9	12.3	12.8	13.2	13.7	14.1	14.5	15	15.4	15.9
Maximum speed (mm/sec)	Lead 32	1800										1620	1440	1260	1080	990	810	720	630	630	540	450	360	360	
	Lead 20	1200										1080	960	840	720	660	540	480	420	420	360	300	240	240	
	Lead 10	600										540	480	420	360	330	270	240	210	210	180	150	120	120	
	Lead 5	300										270	240	210	180	165	135	120	105	105	90	75	60	60	
Speed setting		-										90%	80%	70%	60%	55%	45%	40%	35%	35%	30%	25%	20%	20%	