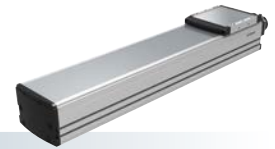


AGXS16

Advanced model

Single-axis robots

Slider type



Ordering method

AGXS16									EP-01					
Model	Acceleration/deceleration specifications	Lead	Shape <small>Note 1</small>	Motor specification	Stroke <small>Note 2</small>	Cable length <small>Note 3</small>	Cable entry location	Robot positioner	Driver: Power capacity	Regenerative unit <small>Note 4</small>	I/O	Battery <small>Note 5</small>		
	No entry: Standard H: High agility	40: 40 mm 20: 20 mm 10: 10 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	100 to 1450 (50mm pitch)	R3: 3 m R5: 5 m R10: 10 m	R: From rear of motor F: From front of motor	EP-01	A30: 400W/750W	No entry: None R: With EP-RU	EP: EtherNet/IP™ PT: PROFINET ES: EtherCAT NS: NPN CC: CC-Link	B: With battery N: None		

Note 1. When the shape is bending (R, L), the high acceleration/deceleration specifications cannot be selected.

Note 2. For the high acceleration/deceleration specifications, the stroke is 100 to 800 mm (50 mm pitch).

Note 3. The robot cable is flexible and resists bending.

Note 4. When the actuator is used vertically, the regenerative unit is needed. When the actuator is used horizontally and the stroke of lead 20 is 400 to 850 mm or the stroke of lead 40 is 600 to 950 mm, the regenerative unit is needed.

Note 5. When the motor specification is the standard (S, BK), whether to use the battery needs to be selected.

Specifications

AC servo motor output	750 W		
Repeatability <small>Note 1</small>	±0.005 mm		
Deceleration mechanism	Ground ball screw φ 20 (C5 class)		
Stroke	100 mm to 1450 mm (50 mm pitch)		
Maximum speed <small>Note 2</small>	2400 mm/sec	1200 mm/sec	600 mm/sec
Ball screw lead	40 mm	20 mm	10 mm
Maximum payload	Horizontal	Vertical	
	45 kg	95 kg	130 kg
	12 kg	28 kg	55 kg
Rated thrust	320 N	640 N	1280 N
Maximum dimensions of cross section of main unit	W 160 mm × H 130 mm		
Overall length	Straight	ST + 344.8 mm	
	Bending	ST + 294.5 mm	
Degree of cleanliness <small>Note 3</small>	ISO CLASS 3 (ISO14644-1) or equivalent		
Intake air <small>Note 4</small>	30 Nl/min to 90 Nl/min		
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 800 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 3. When using in a clean environment, attach a suction air joint. The degree of cleanliness is the cleanliness level achieved when using at 1000 mm/sec or less.
 Note 4. The required suction amount will vary according to the operating conditions and operating environment.
 Note. See P.130 for acceleration/deceleration.

Allowable overhang

AGXS16-40	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)			
	A	B	C	A	B	C	A	B	C	
15kg	2876	1866	1253	15kg	1273	1802	2797	3kg	6605	6605
30kg	2385	997	776	30kg	782	935	2263	6kg	3699	3699
45kg	2339	720	604	45kg	598	658	2174	12kg	2827	2827

AGXS16-20	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)			
	A	B	C	A	B	C	A	B	C	
30kg	3862	1255	1106	30kg	1102	1192	3742	10kg	3404	3404
50kg	2568	733	652	50kg	630	671	2422	20kg	1740	1740
80kg	1798	440	394	80kg	360	377	1612	28kg	1504	1504
95kg	1579	362	325	95kg	288	300	1373			

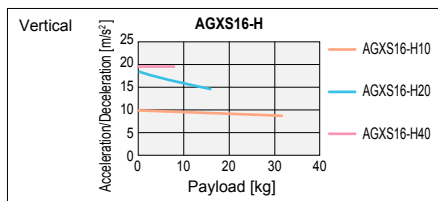
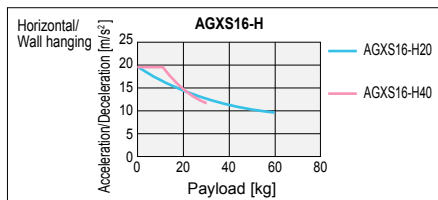
Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.
 Note. Service life is calculated for 600 mm stroke models.

When used with high acceleration or deceleration (High agility mode)

Specifications

Stroke	100 mm to 800 mm (50 mm pitch)		
Ball screw lead	40 mm	20 mm	10 mm
Maximum payload	30 kg	60 kg	-
Maximum acceleration	Horizontal	Vertical	
	19.62 m/s ² (2 G)	19.84 m/s ² (2 G)	-
Maximum payload	8 kg	16 kg	32 kg
Maximum acceleration	19.62 m/s ² (2 G)	18.43 m/s ² (1.9 G)	11.17 m/s ² (1.1 G)

Payload - Acceleration / Deceleration Graph (Estimate)



Allowable overhang

AGXS16-H40	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)			
	A	B	C	A	B	C	A	B	C	
10kg	1271	1669	836	10kg	816	1585	1240	3kg	2904	2904
20kg	725	803	429	20kg	404	725	683	5kg	1710	1710
30kg	534	514	287	30kg	259	441	480	8kg	1038	1038

AGXS16-H20	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)			
	A	B	C	A	B	C	A	B	C	
20kg	1722	1123	875	20kg	842	1056	1679	5kg	3473	3473
40kg	952	535	428	40kg	388	470	895	10kg	1723	1723
60kg	682	339	276	60kg	232	275	611	16kg	1064	1064

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

Effective stroke and maximum speed during high acceleration or deceleration

Effective stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800																																																
Maximum speed (mm/sec)	<table border="1"> <tr> <td>Lead 40</td> <td colspan="15">2400</td> </tr> <tr> <td>Lead 20</td> <td colspan="15">1200</td> </tr> <tr> <td>Lead 10</td> <td colspan="15">600</td> </tr> </table>															Lead 40	2400															Lead 20	1200															Lead 10	600														
Lead 40	2400																																																														
Lead 20	1200																																																														
Lead 10	600																																																														

Note. The bending unit cannot be used for the high agility mode.
 Note. The high agility mode is used in an effective stroke range of 100 to 800 (50 mm pitch).
 Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke.
 The speed may not reach the maximum speed if the movement distance is short or depending on the operating conditions.
 Note. When the actuator is used with the high acceleration/deceleration specifications, the operation duty and motor load factor need to be considered. (See P.93.)
 Note. See P.132 for acceleration/deceleration.

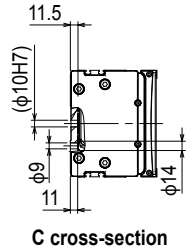
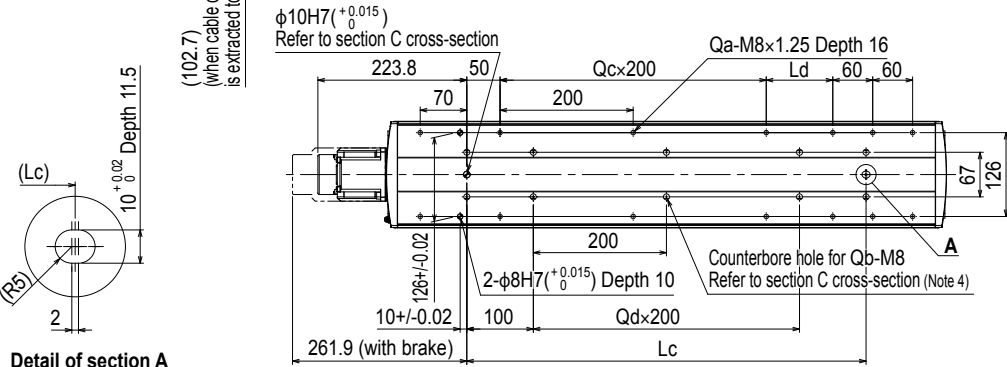
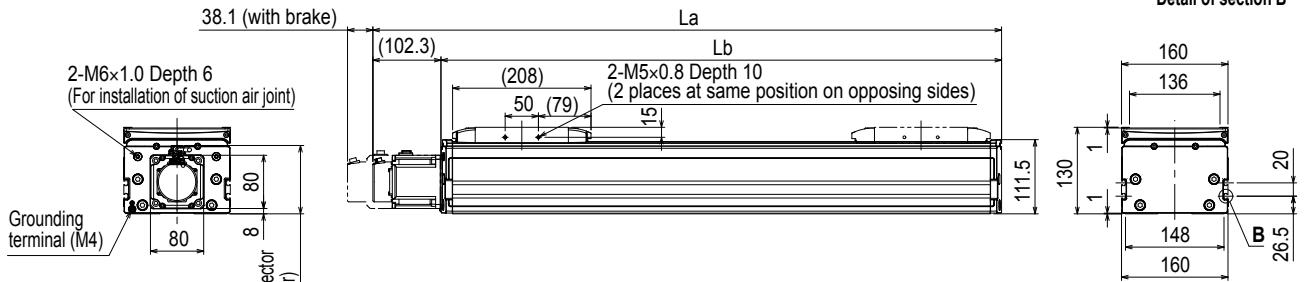
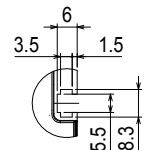
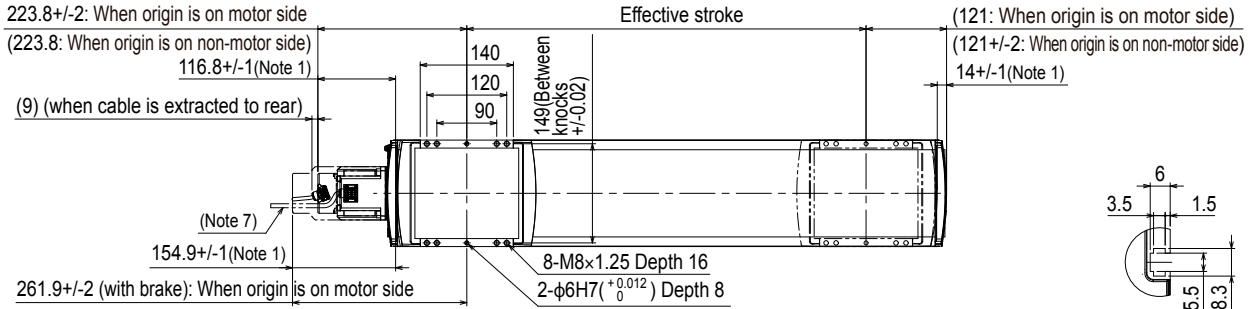
Access the website below.



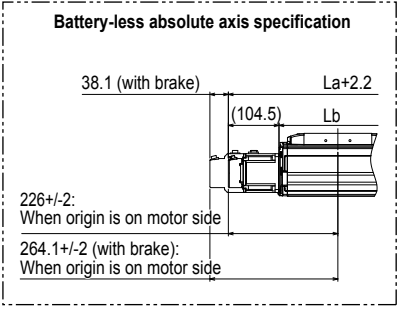
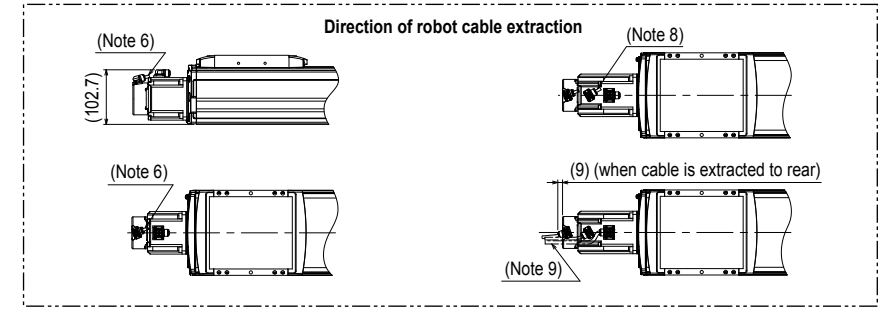
▶ The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.12.

Features
 Basic model
 LBAS
 Advanced model
 LGXS
 Basic model
 LBAR
 Basic model
 ABAS
 Advanced model
 ABAR
 Basic model
 AGXS
 Basic model
 ABAR
 Acceleration/Deceleration
 Inertia Moment
 Option
 Single-axis positioner
 EP-01

AGXS16 Straight type (S)



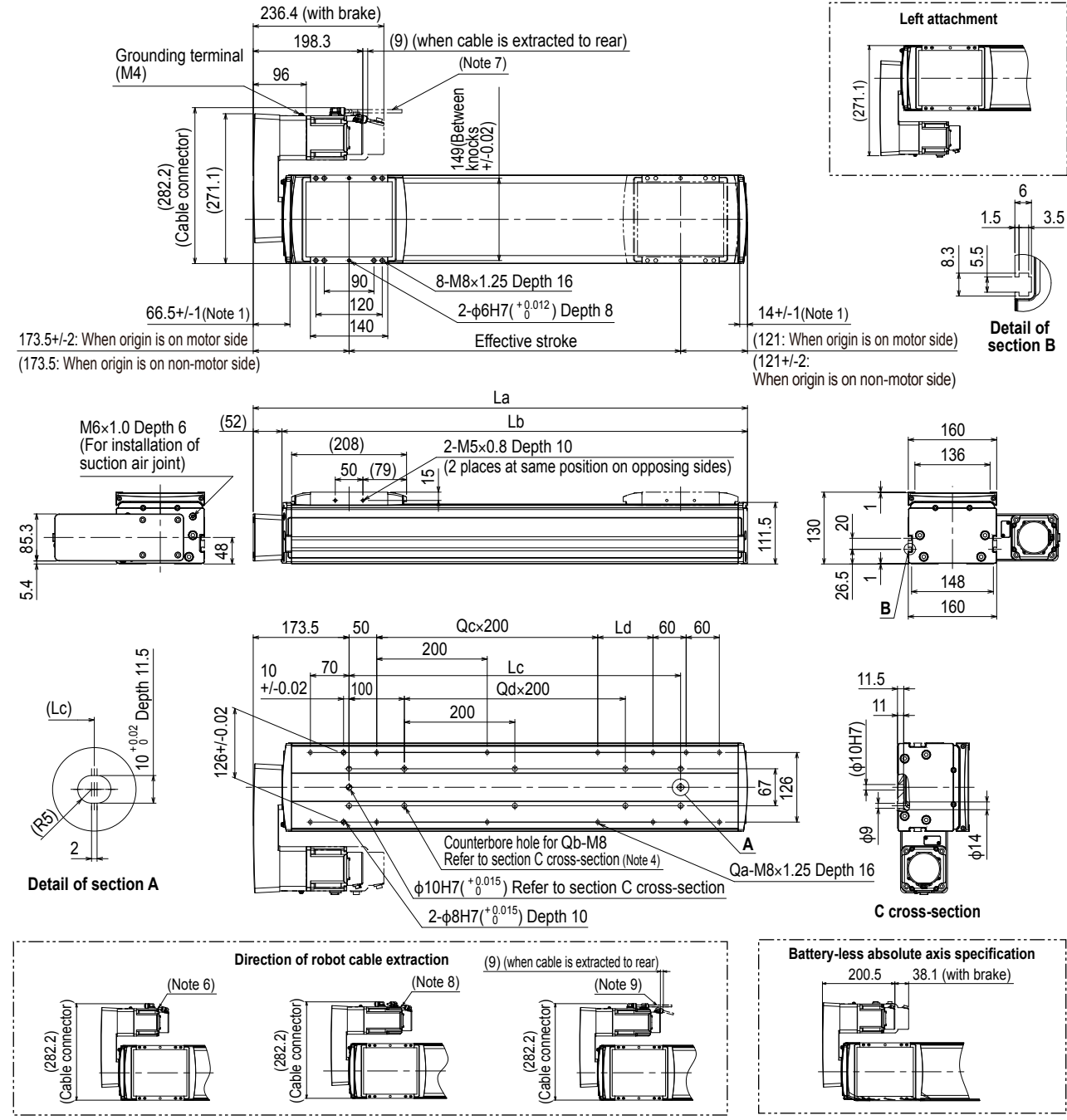
Detail of section A



- 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. The length under head of the hex socket head bolts <M8 x 1.25> used to mount the body with the mounting counterbore holes (section C cross-section) must be <<25 mm or more>>. The recommended length under head of the hex socket head bolts <M8 x 1.25> used to mount the body with the mounting tap hole specifications is <<frame thickness + 15 mm or less>>.
- Note 4. When using the mounting counterbore holes (section C cross-section) to mount the body, remove the seal, and then fix.
- Note 5. Weight without brake. The weight with the brake is 0.9 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.
- Note 11. Grease gun nozzle (recommended) (see P.143 for detail)

Effective 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	1350	1400	1450					
La	444.8	494.8	544.8	594.8	644.8	694.8	744.8	794.8	844.8	894.8	944.8	994.8	1044.8	1094.8	1144.8	1194.8	1244.8	1294.8	1344.8	1394.8	1444.8	1494.8	1544.8	1594.8	1644.8	1694.8	1744.8	1794.8					
Lb	342.5	392.5	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	1192.5	1242.5	1292.5	1342.5	1392.5	1442.5	1492.5	1542.5	1592.5	1642.5	1692.5					
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	1350	1400	1450					
Ld	0	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	1300	1350	1400	1450			
Qa	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20	20	22	22	22	22				
Qb	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18				
Qc	0	0	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	6	6				
Qd	0	0	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	6	6				
Weight (kg)	13.6	14.6	15.6	16.6	17.6	18.5	19.5	20.5	21.5	22.5	23.4	24.4	25.4	26.4	27.4	28.4	29.3	30.3	31.3	32.3	33.3	34.3	35.2	36.2	37.2	38.2	39.2	40.1					
Maximum speed (mm/sec)	Lead 40																2160	1920	1680	1440	1320	1200	1080	960	840	720	600	600	540	480	420	360	300
	Lead 20																1080	960	840	720	660	600	540	480	420	360	300	270	240	210	180	150	
	Lead 10																540	480	420	360	330	300	270	240	210	180	150						
	Speed setting																90%	80%	70%	60%	55%	50%	45%	40%	35%	30%	25%						

AGXS16 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. The length under head of the hex socket head bolts <M8 × 1.25> used to mount the body with the mounting counterbore holes (section C cross-section) must be <<25 mm or more>>. The recommended length under head of the hex socket head bolts <M8 × 1.25> used to mount the body with the mounting tap hole specifications is <<frame thickness + 15 mm or less>>.
- Note 4. When using the mounting counterbore holes (section C cross-section) to mount the body, remove the seal, and then fix.
- Note 5. Weight without brake. The weight with the brake is 0.9 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.
- Note 11. When the shape is bending (R, L), the high acceleration/deceleration specifications cannot be selected.
- Note 12. Grease gun nozzle (recommended) (see P.143 for detail)

Effective 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	1350	1400	1450				
La	394.5	444.5	494.5	544.5	594.5	644.5	694.5	744.5	794.5	844.5	894.5	944.5	994.5	1044.5	1094.5	1144.5	1194.5	1244.5	1294.5	1344.5	1394.5	1444.5	1494.5	1544.5	1594.5	1644.5	1694.5	1744.5				
Lb	342.5	392.5	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	1192.5	1242.5	1292.5	1342.5	1392.5	1442.5	1492.5	1542.5	1592.5	1642.5	1692.5				
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	1350	1400	1450				
Ld	0	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	1300	1350	1400	1450		
Qa	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	18	20	20	20	20	22	22	22			
Qb	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	14	14	14	14	14	16	16	16	16	16	18	18	18			
Qc	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	4	5	5	5	5	6	6	6			
Qd	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	4	5	5	5	5	6	6	6			
Weight (kg) Note 5	16.3	17.3	18.3	19.3	20.3	21.2	22.2	23.2	24.2	25.2	26.1	27.1	28.1	29.1	30.1	31.1	32.0	33.0	34.0	35.0	36.0	37.0	37.9	38.9	39.9	40.9	41.9	42.8				
Maximum speed (mm/sec)	Lead 40															2400				2160		1920	1680	1440	1320	1200	1080	960		840	720	600
	Lead 20															1200				1080		960	840	720	660	600	540	480		420	360	300
	Lead 10															600				540		480	420	360	330	300	270	240		210	180	150
	Speed setting															-				90%		80%	70%	60%	55%	50%	45%	40%		35%	30%	25%

Features: LBAS (Basic model), LGXS (Advanced model), LBAR (Basic model), ABAS (Basic model), AGXS (Advanced model), ABAR (Basic model)

Acceleration/Deceleration: Inertia Moment

Option: Single axis speed parameter EP-01