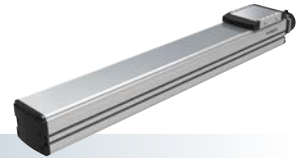


AGXS10

Advanced model Single-axis robots

Slider type



Ordering method

AGXS10										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	30: 30 mm 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	100 to 1250 (50mm pitch)	R3: 3 m R5: 5 m R10: 10 m	R: From rear of motor F: From front of motor	EP-01	A10: 200 W or less	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 650 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 10, 20, or 30 is 100 to 800 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	200 W
Repeatability <small>Note 1</small>	+/-0.005 mm
Deceleration mechanism	Ground ball screw φ 15 (C5 class)
Stroke	100 mm to 1250 mm(50 mm pitch)
Maximum speed <small>Note 2</small>	1800 mm/sec 1200 mm/sec 600 mm/sec 300 mm/sec
Ball screw lead	30 mm 20 mm 10 mm 5 mm
Maximum payload	Horizontal: 25 kg, 40 kg, 80 kg, 100 kg Vertical: 4 kg, 8 kg, 20 kg, 30 kg
Rated thrust	113 N, 170 N, 341 N, 683 N
Maximum dimensions of cross section of main unit	W 100 mm × H 99.5 mm
Overall length	Straight: ST + 250.5 mm Bending: ST + 220.5 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	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 700 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.122 for acceleration/deceleration.

Allowable overhang

AGXS10-30	AGXS10-20	AGXS10-10	AGXS10-5
Horizontal installation (Unit: mm)	Horizontal installation (Unit: mm)	Horizontal installation (Unit: mm)	Horizontal installation (Unit: mm)
10kg: 878, 537, 292 20kg: 609, 256, 146 25kg: 608, 211, 124	15kg: 1269, 451, 282 25kg: 754, 253, 158 40kg: 466, 142, 88	30kg: 1794, 298, 203 50kg: 1358, 162, 111 80kg: 1266, 86, 59	30kg: 5605, 321, 225 50kg: 3694, 177, 124 80kg: 2619, 95, 67 100kg: 2224, 68, 48
Wall installation (Unit: mm)	Wall installation (Unit: mm)	Wall installation (Unit: mm)	Wall installation (Unit: mm)
10kg: 271, 473, 803 20kg: 118, 192, 481 25kg: 93, 147, 454	15kg: 252, 387, 1159 25kg: 123, 189, 629 40kg: 51, 78, 311	30kg: 162, 234, 1623 50kg: 68, 98, 1060 80kg: 16, 22, 552	30kg: 181, 258, 5195 50kg: 79, 113, 3111 80kg: 22, 31, 1557 100kg: 0, 0, 0
Vertical installation (Unit: mm)	Vertical installation (Unit: mm)	Vertical installation (Unit: mm)	Vertical installation (Unit: mm)
1kg: 4135, 4135 4kg: 985, 985	3kg: 2062, 2062 6kg: 1012, 1012 8kg: 750, 750	5kg: 1926, 1926 10kg: 931, 931 20kg: 434, 434	10kg: 1018, 1018 20kg: 477, 477 30kg: 296, 296

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.

Static loading moment

	MY	MP	MR
	274	274	241

Controller

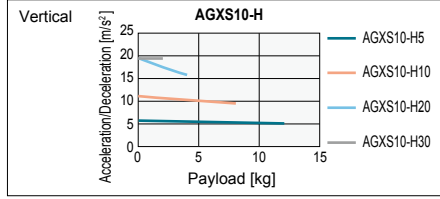
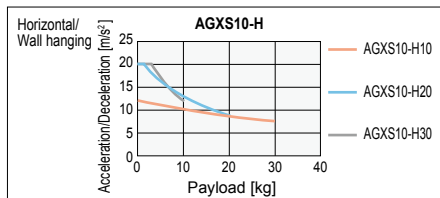
Controller	Operation method
EP-01	I/O point trace/ Remote command

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

Specifications

Stroke	100 mm to 650 mm (50 mm pitch)			
Ball screw lead	30 mm	20 mm	10 mm	5 mm
Maximum payload	10 kg	20 kg	30 kg	-
Maximum acceleration	19.62 m/s ² (2 G)	19.62 m/s ² (2 G)	11.71 m/s ² (1.2 G)	-
Maximum payload	2 kg	4 kg	8 kg	12 kg
Maximum acceleration	19.62 m/s ² (2 G)	19.62 m/s ² (2 G)	10.84 m/s ² (1.1 G)	5.53 m/s ² (0.6 G)

Payload - Acceleration / Deceleration Graph (Estimate)



Allowable overhang

AGXS10-H30	AGXS10-H20	AGXS10-H10	AGXS10-H5
Horizontal installation (Unit: mm)	Horizontal installation (Unit: mm)	Horizontal installation (Unit: mm)	Vertical installation (Unit: mm)
3kg: 1041, 1117, 541 6kg: 581, 534, 266 10kg: 384, 300, 153	5kg: 1218, 844, 493 12kg: 575, 326, 193 20kg: 375, 177, 106	10kg: 1851, 568, 383 20kg: 973, 263, 177 30kg: 671, 162, 109	4kg: 1550, 1550 8kg: 743, 743 12kg: 474, 474
Wall installation (Unit: mm)	Wall installation (Unit: mm)	Wall installation (Unit: mm)	Vertical installation (Unit: mm)
3kg: 521, 1046, 1009 6kg: 241, 466, 539 10kg: 125, 235, 327	5kg: 464, 778, 1177 12kg: 159, 261, 516 20kg: 70, 113, 290	10kg: 343, 504, 1784 20kg: 136, 199, 885 30kg: 67, 98, 552	1kg: 2054, 2054 2kg: 994, 994
Vertical installation (Unit: mm)	Vertical installation (Unit: mm)	Vertical installation (Unit: mm)	Vertical installation (Unit: mm)
1kg: 2054, 2054 2kg: 994, 994	2kg: 1602, 1602 4kg: 788, 788	3kg: 1849, 1849 5kg: 1086, 1086 8kg: 656, 656	

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
Maximum speed (mm/sec)												
Lead 30	1800											
Lead 20	1200											
Lead 10	600											
Lead 5	300											

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 650 (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.124 for acceleration/deceleration.

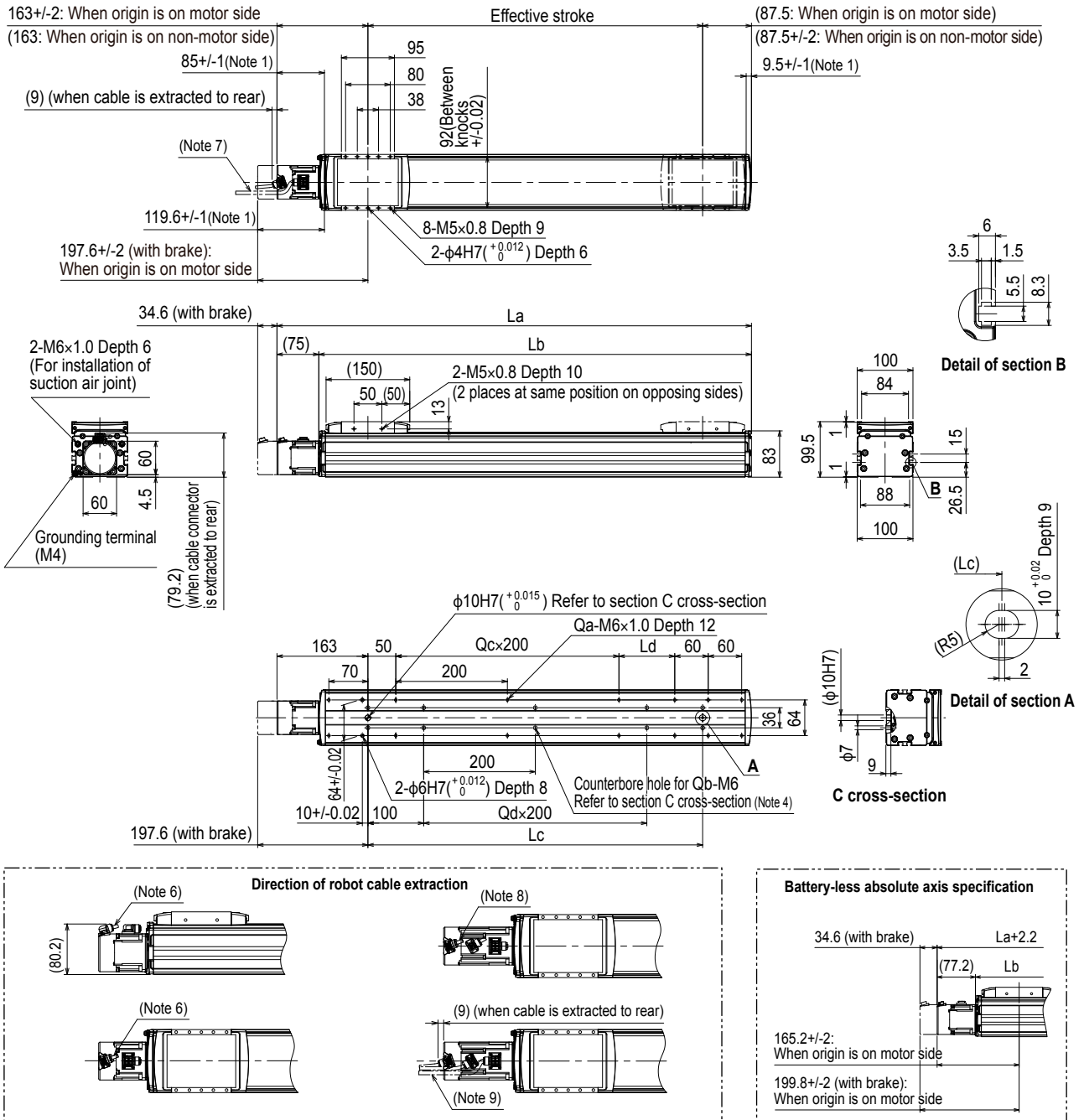
Access the website below.



▶ 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
 AGXS
 Basic model
 ABAR
 Acceleration/Deceleration
 Inertia Moment
 Option
 Single axis robot
 EP-01

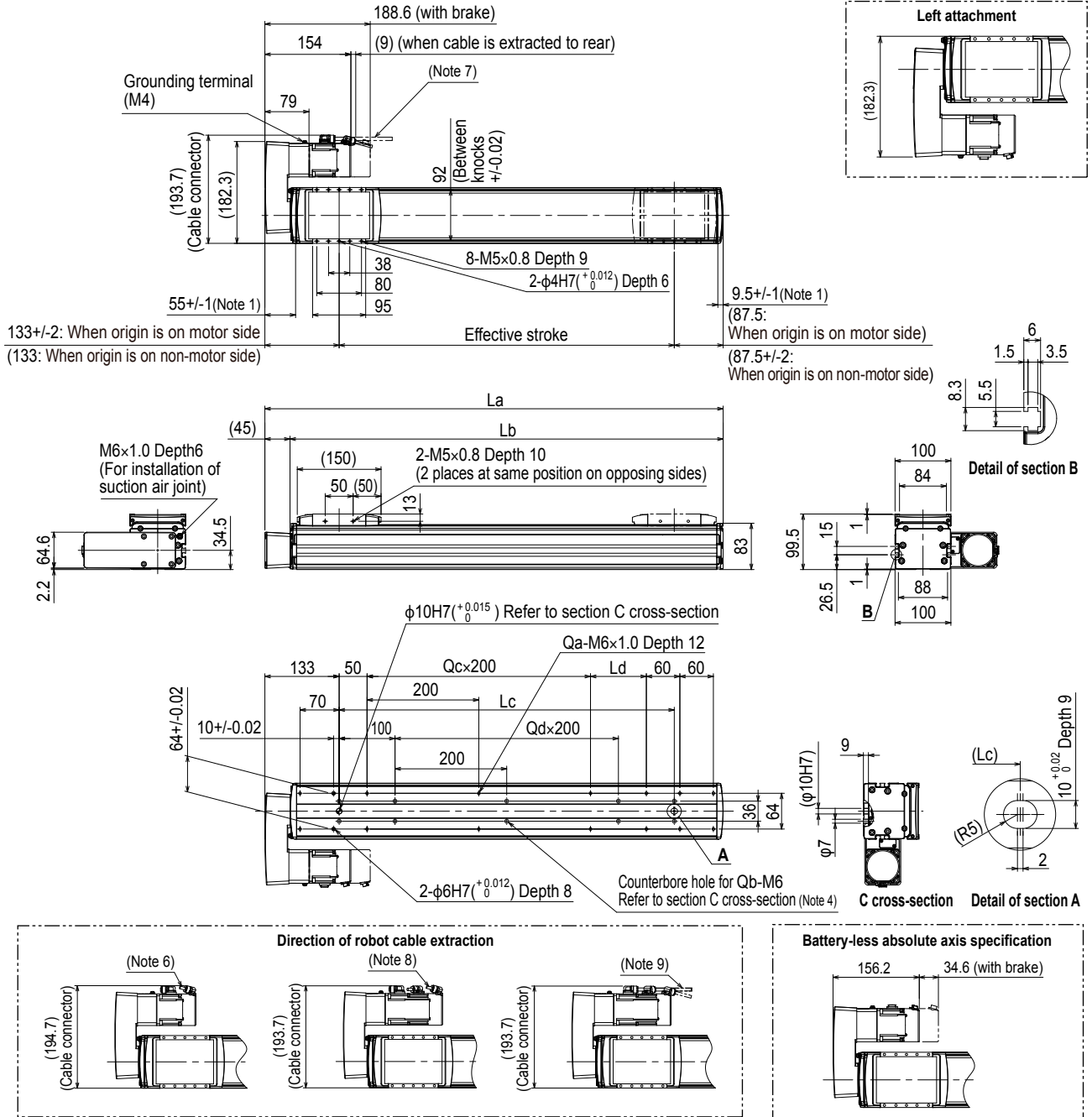
AGXS10 Straight type (S)



- 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. The length under head of the hex socket head bolts <M6 × 1.0> used to mount the body with the mounting counterbore holes (section C cross-section) must be <<20 mm or more>>. The recommended length under head of the hex socket head bolts <M6 × 1.0> used to mount the body with the mounting tap hole specifications is <<frame thickness + 10 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 0.4 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.
- 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		
La	350.5	400.5	450.5	500.5	550.5	600.5	650.5	700.5	750.5	800.5	850.5	900.5	950.5	1000.5	1050.5	1100.5	1150.5	1200.5	1250.5	1300.5	1350.5	1400.5	1450.5	1500.5		
Lb	275.5	325.5	375.5	425.5	475.5	525.5	575.5	625.5	675.5	725.5	775.5	825.5	875.5	925.5	975.5	1025.5	1075.5	1125.5	1175.5	1225.5	1275.5	1325.5	1375.5	1425.5		
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		
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		
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		
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		
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		
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		
Weight (kg) Note 5	5.4	5.9	6.4	6.9	7.4	7.9	8.4	8.9	9.4	9.9	10.4	10.9	11.4	11.9	12.4	12.9	13.4	13.9	14.4	14.9	15.4	15.9	16.4	16.9		
Maximum speed (mm/sec)	Lead 30	1800											1530	1350	1170	990	900	810	720	630	540	450				
	Lead 20	1200												1020	900	780	660	600	540	480	420	360	300			
	Lead 10	600												510	450	390	330	300	270	240	210	180	150			
	Lead 5	300												255	225	195	165	150	135	120	105	90	75			
Speed setting	-												85%	75%	65%	55%	50%	45%	40%	35%	30%	25%				

AGXS10 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 <M6 x 1.0> used to mount the body with the mounting counterbore holes (section C cross-section) must be <<20 mm or more>>. The recommended length under head of the hex socket head bolts <M6 x 1.0> used to mount the body with the mounting tap hole specifications is <<frame thickness + 10 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 0.4 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.
- 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			
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			
Lb	275.5	325.5	375.5	425.5	475.5	525.5	575.5	625.5	675.5	725.5	775.5	825.5	875.5	925.5	975.5	1025.5	1075.5	1125.5	1175.5	1225.5	1275.5	1325.5	1375.5	1425.5			
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			
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			
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			
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			
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			
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			
Weight (kg) Note 5	6.6	7.1	7.6	8.1	8.6	9.1	9.6	10.1	10.6	11.1	11.6	12.1	12.6	13.1	13.6	14.1	14.6	15.1	15.6	16.1	16.6	17.1	17.6	18.1			
Maximum speed (mm/sec)	Lead 30												1530	1350	1170	990	900	810	720	630	540	450	360	300	250		
	Lead 20												1020	900	780	660	600	540	480	420	360	300	250	210	180	150	
	Lead 10												510	450	390	330	300	270	240	210	180	150	120	105	90	75	
	Lead 5												255	225	195	165	150	135	120	105	90	75	60	52.5	45	37.5	
Speed setting												85%	75%	65%	55%	50%	45%	40%	35%	30%	25%						

Features

- Basic model: LBAS
- Advanced model: LGXS
- Basic model: LBAR
- Basic model: ABAS
- Advanced model: AGXS
- Basic model: ABAR

Acceleration/Deceleration
Inertia Moment

Option
Single axis speed
positioner EP-01