AGBS14/AGBS14H

Advanced model **Single-axis robots** **Timing Belt Drive type**

Ordering method

Model	Lead	Shape	Motor specification	OP.1	Stroke	Cable length Note 1	Cable entry location	Robot positioner	Driver: Power capacity	Regenerative unit Note 2	I/O	Battery Note 3
AGBS14 AGBS14H	50: 50mm 30: 30mm	R: Motor rightward, horizontal position L: Motor leftward, horizontal position RU: Motor rightward, upper position LU: Motor leftward, upper position RD: Motor rightward, lower position LD: Motor leftward, lower position	S: Standard/With no brake BL: Battery-less absolute/ With no brake	No entry: Standard M: Centeralized lubrication	150 to 4000 (50mm pitch)	R3: 3m R5: 5m R10: 10m	R: From rear of motor F: From front of motor	EP-01	A10: 200W or less A30: 400W/750W	No entry: None R: With EP-RU C: With RU-1	EP: EtherNet/IP™ PT: PROFINET ES: EtherCAT NS: NPN CC: CC-Link	B: With battery N: None

Note 1. The robot cable is flexible and resists bending.
Note 2. [For AGBS14]
When the actuator is used horizontally, ①lead 30 is selected, and the stroke is 2300mm or more, ②lead 50 is selected, and the stroke is 650mm or more, the regenerative unit is needed.
[For AGBS14H]
When the actuator is used horizontally, ①lead 30 is selected, and the stroke is 800mm or more, ②lead 50 is selected, and the stroke is 500mm or more, the regenerative unit is needed.(In this case, please choose the regenerative device 'RU1'. ①lead 50 is selected, and the stroke is 1550mm or more)
Note 3. When the motor specification is the standard (S, BK), whether to use the battery needs to be selected.
Note. The return-to-origin direction can be changed by changing the parameter. (The standard is that the origin is located on the motor side. For details about how to change the return-to-origin direction, see the instruction manual for EP-01.)

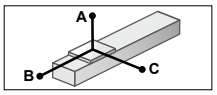
AGBS14 (200W)

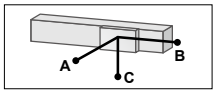
Specifications

AC servo motor output		200 W	
Repeatability Note 1		±0.04 mm	
Stroke		150 mm to 4000 mm (50 mm pitch)	
Maximum Speed Note 2		3750 mm/sec	2250 mm/sec
Belt		Equivalent to 50-mm Lead	Equivalent to 30-mm Lead
Maximum payload	Horizontal	8 kg	30 kg
Maximum dimensions of cross section of main unit		W 140 mm × H 83 mm	
Overall length	L/R Specifications	ST + 474.5 mm	
	Other than the above	ST + 405 mm	
Degree of Cleanliness Note 3		Equivalent to ISO Class 3 (ISO 14644-1)	
Intake air Note 4		90 Nℓ/min	
Position detector		Absolute Encoder Batteryless Absolute Encoder	
Resolution		23 bits	
Using ambient temperature and humidity Note 5		0 to 40 °C, 35 to 80 %RH (no condensation)	

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.
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 5.When operating in low-temperature environments, a deviation error may occur when starting from a stopped state. In such cases, reduce the speed to 50% or less and run the unit for at least one full cycle before setting it to the desired operating speed.

Allowable overhang Note





AGBS14-50

Horizontal installation (Unit: mm)

	A	B	C
4kg	4595	3295	2628
6kg	4027	2188	2007
8kg	3739	1634	1647

Wall installation (Unit: mm)

	A	B	C
4kg	2664	3259	4554
6kg	2051	2151	3973
8kg	1696	1598	3672

AGBS14-30

Horizontal installation (Unit: mm)

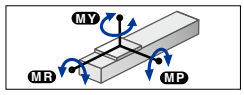
	A	B	C
10kg	2334	1302	1236
20kg	1641	637	670
30kg	1601	442	519

Wall installation (Unit: mm)

	A	B	C
10kg	1237	1265	2289
20kg	675	601	1565
30kg	517	405	1495

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 1000 mm stroke models.
Note. When using it suspended from the ceiling, the overhang will be the same as when used horizontally.

Static loading moment



(Unit: N·m)

MY	MP	MR
537	537	472

Controller

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

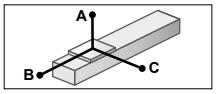
AGBS14H (400W)

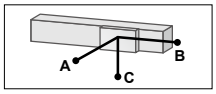
Specifications

AC servo motor output		400 W	
Repeatability Note 1		±0.04 mm	
Stroke		150 mm to 4000 mm (50 mm pitch)	
Maximum Speed Note 2		3750 mm/sec	2250 mm/sec
Belt		Equivalent to 50-mm Lead	Equivalent to 30-mm Lead
Maximum payload	Horizontal	30 kg	60 kg
Maximum dimensions of cross section of main unit		W 140 mm × H 83 mm	
Overall length	L/R Specifications	ST + 474.5 mm	
	Other than the above	ST + 405 mm	
Degree of Cleanliness Note 3		Equivalent to ISO Class 3 (ISO 14644-1)	
Intake air Note 4		90 Nℓ/min	
Position detector		Absolute Encoder Batteryless Absolute Encoder	
Resolution		23 bits	
Using ambient temperature and humidity Note 5		0 to 40 °C, 35 to 80 %RH (no condensation)	

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.
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 5.When operating in low-temperature environments, a deviation error may occur when starting from a stopped state. In such cases, reduce the speed to 50% or less and run the unit for at least one full cycle before setting it to the desired operating speed.

Allowable overhang Note





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Horizontal installation (Unit: mm)

	A	B	C
10kg	943	621	429
20kg	768	302	279
30kg	746	208	220

Wall installation (Unit: mm)

	A	B	C
10kg	479	408	627
20kg	276	182	477
30kg	198	115	434

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Horizontal installation (Unit: mm)

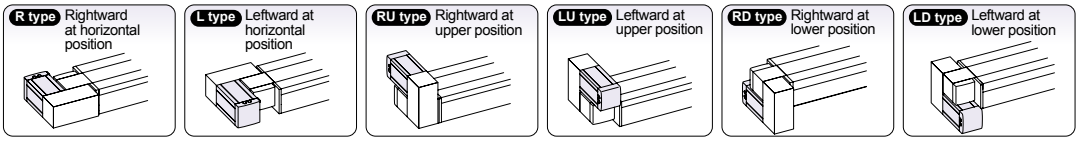
	A	B	C
20kg	1519	637	652
40kg	1501	344	424
60kg	1596	250	332

Wall installation (Unit: mm)

	A	B	C
20kg	653	601	1449
40kg	414	308	1374
60kg	309	213	1410

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 1000 mm stroke models.
Note. When using it suspended from the ceiling, the overhang will be the same as when used horizontally.

Motor installation The line-up consisting of six models of deferent motor installation position as follows.



▶ **The cycle time simulation and service life calculation can be performed easily from our member site.**

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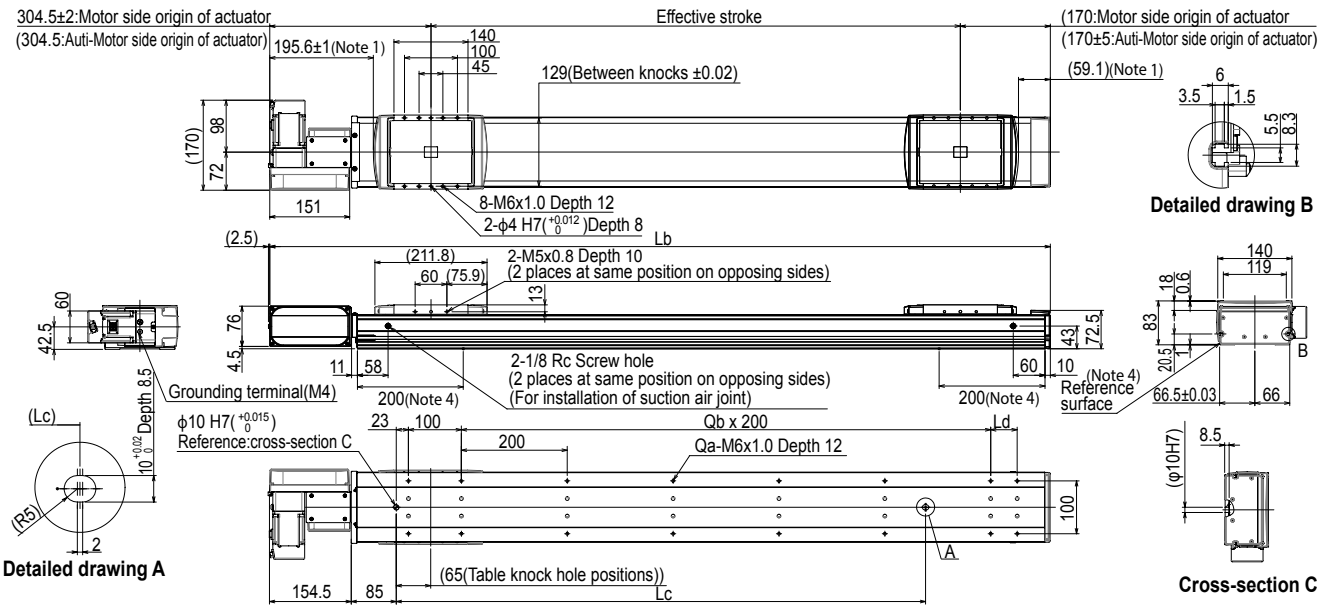
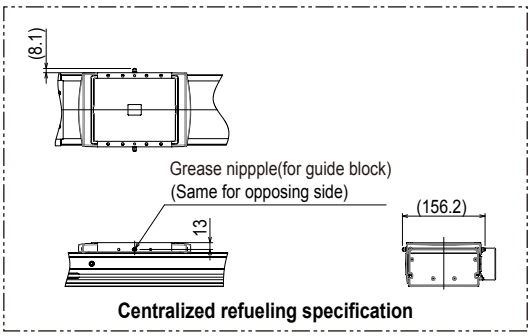
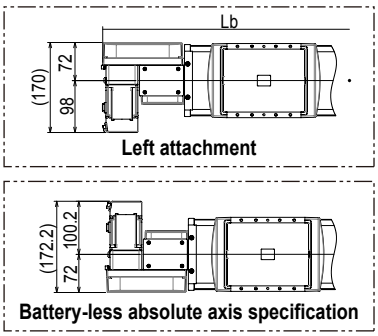
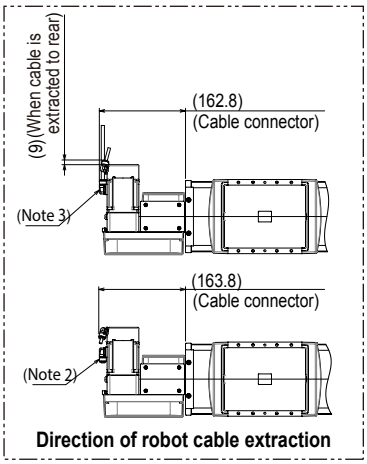
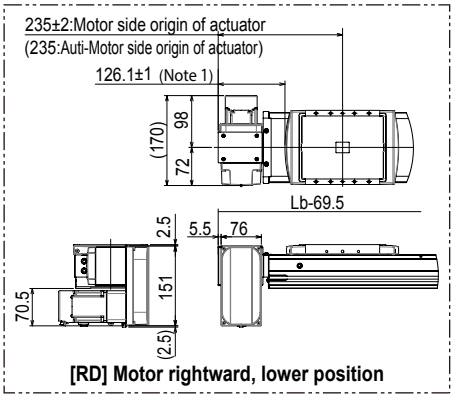
AGBS14H

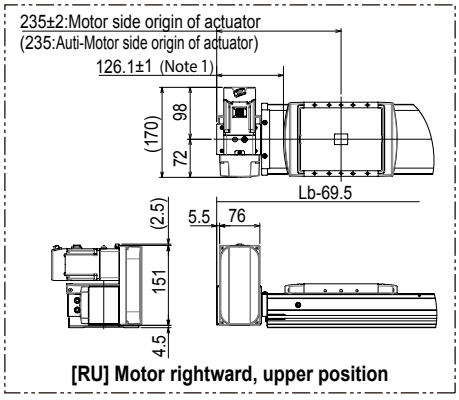












Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. The robot cable is extracted from the front.
Note 3. The robot cable is extracted from the rear.
Note 4. When the effective stroke is 2050 mm or more, the reference plane is within 200 mm of the frame end face.
Note. The return-to-origin direction can be changed by changing the parameter. (The standard is that the origin is located on the motor side. For details about how to change the return-to-origin direction, see the instruction manual for EP-01.)
Note. In the installation tap hole, the length under head <<thickness of stand +10mm or less>> is recommended for the hex socket head bolts <M6×1.0> used to install the main unit.
Note. The minimum bending radius for robot cables should be R30 or more for fixed cables / R50 or more for movable cables.

Effective stroke		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	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050
Lb		624.5	674.5	724.5	774.5	824.5	874.5	924.5	974.5	1024.5	1074.5	1124.5	1174.5	1224.5	1274.5	1324.5	1374.5	1424.5	1474.5	1524.5	1574.5	1624.5	1674.5	1724.5	1774.5	1824.5	1874.5	1924.5	1974.5	2024.5	2074.5	2124.5	2174.5	2224.5	2274.5	2324.5	2374.5	2424.5	2474.5	2524.5
Lc		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	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050
Ld		200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
Qa		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	20	20	20	20	22	22	22	22	24	24	24	24	26	26
Qb		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	7	7	7	7	8	8	8	8	9	9	9	9	10	10
Weight (kg)		9.7	10.2	10.6	11.1	11.5	12.0	12.5	12.9	13.4	13.8	14.3	14.8	15.2	15.7	16.1	16.6	17.1	17.5	18.0	18.4	18.9	19.3	19.8	20.3	20.7	21.2	21.6	22.1	22.6	23.0	23.5	23.9	24.4	24.9	25.3	25.8	26.2	26.7	27.2
Stroke restriction	Horizontal · Vertical	No stroke restrictions																																						
	Wall hanging	To 2000st																																						
	Ceiling-mounted	To 1500st																																						

Effective stroke	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700	3750	3800	3850	3900	3950	4000
Lb	2574.5	2624.5	2674.5	2724.5	2774.5	2824.5	2874.5	2924.5	2974.5	3024.5	3074.5	3124.5	3174.5	3224.5	3274.5	3324.5	3374.5	3424.5	3474.5	3524.5	3574.5	3624.5	3674.5	3724.5	3774.5	3824.5	3874.5	3924.5	3974.5	4024.5	4074.5	4124.5	4174.5	4224.5	4274.5	4324.5	4374.5	4424.5	4474.5
Lc	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700	3750	3800	3850	3900	3950	4000
Ld	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
Qa	26	26	28	28	28	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40	40	40	42	42	42	42	44	44	44	44	46
Qb	10	10	11	11	11	11	12	12	12	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18	18	18	19	19	19	19	20
Weight (kg)	27.6	28.1	28.5	29.0	29.4	29.9	30.4	30.8	31.3	31.7	32.2	32.7	33.1	33.6	34.0	34.5	35.0	35.4	35.9	36.3	36.8	37.2	37.7	38.2	38.6	39.1	39.5	40	40.5	40.9	41.4	41.8	42.3	42.8	43.2	43.7	44.1	44.6	45.1
Stroke restriction	Horizontal · Vertical	No stroke restrictions																																						
	Wall hanging																																							
	Ceiling-mounted																																							

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