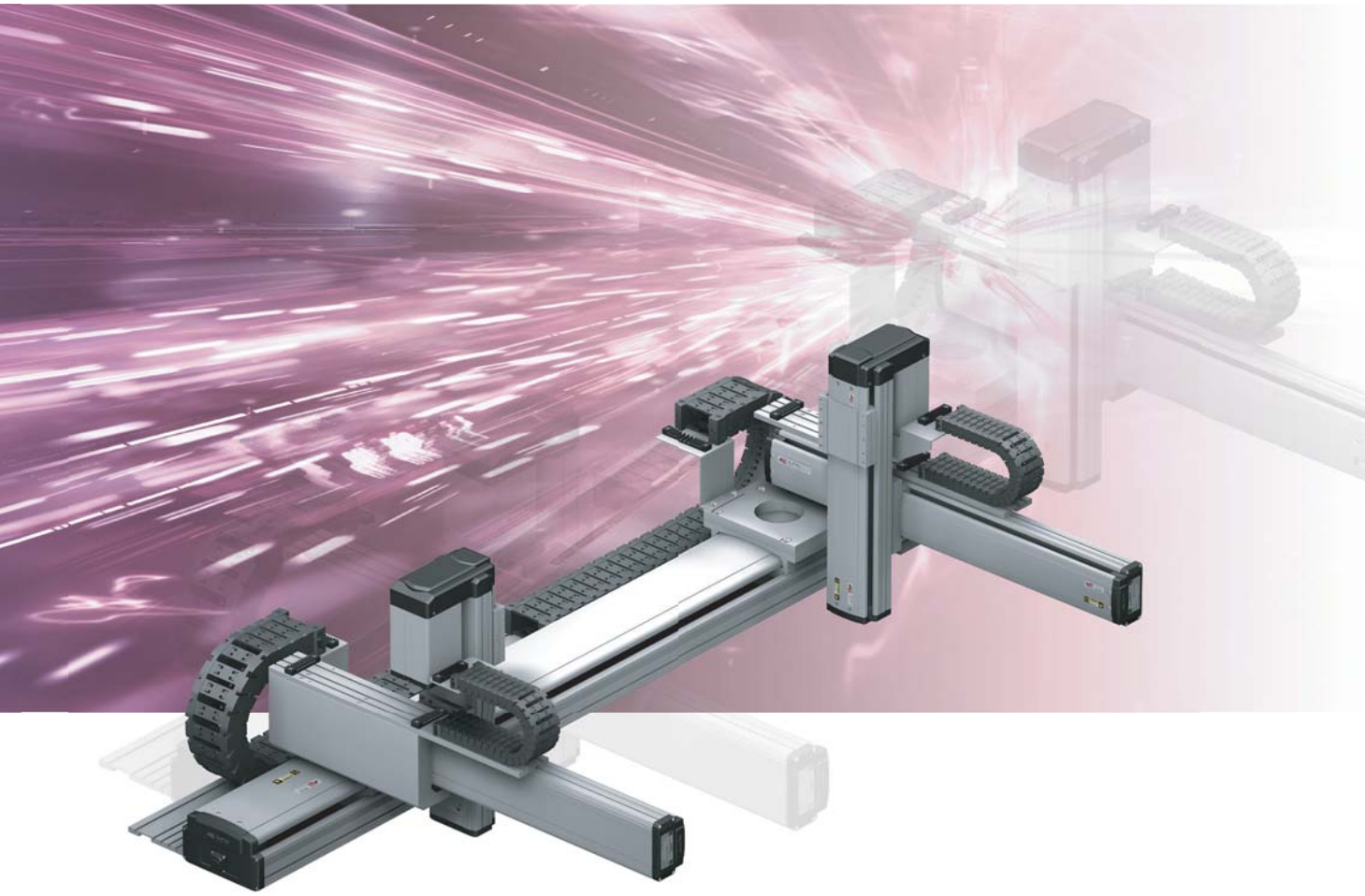
Alpha Dual Robot

DAR

Ball Screw Series



Characteristics

- Multi-slider tables installed on a single actuator capable of operating independently
  한개의 Base에 각각의 구동이 가능한 Slide Table을 장착하여 개별 작업이 가능
- Space saved and cost reduced
  로봇장착이 협소한 공간에서 개별 작업을 요할 때 사용
- Positioning repeatability ±0.02mm (±0.005mm option)
  반복위치 정밀도가 ±0.02mm (Option : ±0.005mm)로 고정도 실현
- With dedicated AC servo motor for robot, convenience of maintenance and high reliability guaranteed
  로봇 전용 AC Servo Motor를 채택하여 유지보수의 편리성 및 높은 신뢰성 실현
- Wide range configuration and application available
  다양한 조합이 가능하도록 설계되어 적용시 유용성 실현

ORDER INFORMATION

A DAR SERIES

DAR200	-	2S	1	-	500	-	40	B	-	N	-	IN
1		2	3		4		5	6		7		8

1 SERIES
2 SHAPE
3 SLIDE TABLE TYPE
4 STROKE (mm)
5 MOTOR RATED OUTPUT
6 BRAKE OPTION
7 SPEED (mm/s)
8 SLIDE TABLE TYPE

B Options

I	-	H	LF	A	45	-	W	-	N	-	F00
1		2	3	4	5		6		7		8

1 SENSOR
2 3 4 5 CABLEVEYOR
6 COLOR OF ROBOT
7 SURFACE TREATMENT
8 CABLE LENGTH

ORDER INFORMATION

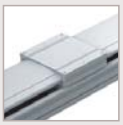
DAR SERIES — ALPHA Standard Robot

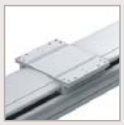

DAR200


DAR250

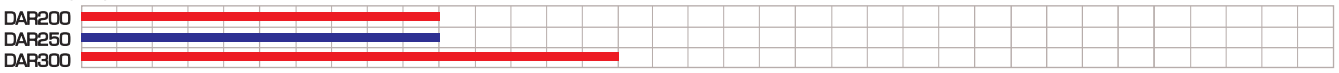

DAR300

2S  Straight Normal Type

1 Normal Type 

2 Plane Type 

STROKE(mm) 500 1000 1500 2000 2500 3000 3500



40 400W **75** 750W

N Without Brake **B** With Brake

L Low Speed Type 250 mm/s **N** Normal Speed Type 500 mm/s **H** High Speed Type 1000 mm/s

IN 

OUT 

I Internal Sensor (Standard) **E** External Sensor

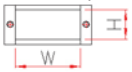
2 Attaching Type

N None **H** Horizontal  **W** Wall Hanging 

3 Cableveyor direction

LF Left - Front **RF** Right - Front
LR Left - Rear **RR** Right - Rear

4 Cableveyor selection (Hmm × Wmm)



Standard	CPS	C 28×55	D 28×75
Cleanroom	IGUS	G 29×60	H 29×80
	TSUBAKI	K 28×60	L 28×80

5 The radius of curvature (mm)

55 R50 ~ R55 **75** R70 ~ R75

* Please see the catalogue A70.3 for more information of cableveyor.

W White (Standard) **B** Black Anodizing

S Surface Treatment (Standard) **R** Raydent Surface Treatment (LM Rail)

Flexible Cable

F00 None **F03** 3m **F05** 5m **F07** 7m **F10** 10m

* Please do not hesitate to contact us when the cable is applied more than 10m.

B ORDER INFORMATION - OPTIONS

2 3 4 5 Cableveyor Selecting Options

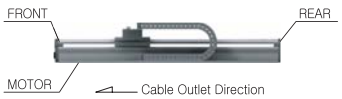
Series	Applicable Type			
	Horizontal	Wall Hanging	Rear	Double
DAR	●	●		

2 3

Applicable Type	Cableveyor Directions			
N None NOTE1	L F Left-Front	R F Right-Front	L R Left-Rear	R R Right-Rear
H Horizontal				
W Wall Hanging				
R Rear				
D Double				

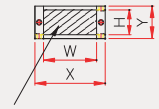
3

Cableveyor Directions

	Cableveyor Mounted Direction		Cable Outlet Direction	
L F	L Left	R Right	F Front	R Rear
Cableveyor Mounted Direction Cable Outlet Direction				

4 5 * Cableveyor Selecting

Unit : mm



Wiring space (Pic 10-1)

STANDARD								CLEANROOM													
Selecting Item	Internal dimentions H	Internal dimentions W	External dimentions Y	External dimentions X	Radius R	Capacity (mm²) NOTE2 Origin		Selecting Item	Internal dimentions H	Internal dimentions W	External dimentions Y	External dimentions X	Radius R	Capacity (mm²) NOTE2 Origin	Selecting Item	Internal dimentions H	Internal dimentions W	External dimentions Y	External dimentions X	Radius R	Capacity (mm²) NOTE2 Origin
A	24	47	31	59.5	45	1128		F	29	40	35	59.5	45	1160	J	28	40	35	60	45	1120
B	28	35	35	79.5	55	980		G		60		79.5	55	1740	K		60		80	55	1680
C		55		99.5	75	1540		H		80		99.5	75	2320	L		80		100	75	2240
D		75		119.5	95	2100		I		100		119.5	95	2900	M		100		120	95	2800
E		100		139.5	100	2800		-			-	-	100	-	-			-	-	100	-

CAUTION

*Be sure to install in the direction as specified individually.
*Installation in any other way will cause a failure.
*For requirement of installation in any way other than the above standard installation, please consult Head Office and Agent.

NOTE1 In case that cableveyor is not affixed, it does not need to mark cableveyor specification and instead, just mark 'N'(none).
NOTE2 Please select the floor area ratio by user's using environment, using condition at below 60%

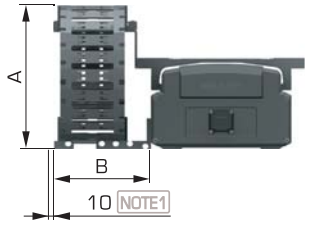
주의

*반드시 개별적으로 지정한 방향으로 설치해 주십시오.
*상기 표준 이외의 방법으로 설치하는 것은 고장의 원인이 됩니다.
*상기 표준 이외의 방법으로 설치할 경우에는 대리점 및 당사에 문의바랍니다.

NOTE1 케이블베어를 장착하지 않을 경우에는 "N"(None)만 표기하고 다른 케이블베어 사양은 표기하지 않습니다.
NOTE2 용적률은 사용자의 용적으로 검토해 주십시오.
용적률은 사용자의 사용환경, 사용조건에 따라 60%이하로 적절히 선정하십시오.

B ORDER INFORMATION

2 H Horizontal Type



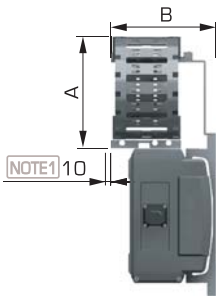
BASE SIZE	CABLEVEYOR		S1		S2	
	Bending radius R	Internal dimentions	A	B	A	B
DAR200	R075	55, 60	208	98	208	118
		75, 80	208	118	208	138
DAR250	R075	55, 60	188	118	188	138
		75, 80	188	118	188	138
DAR300	R095	55, 60	228	118	228	118
		75, 80	228	118	228	138

3 NOTE2 Cableveyor Directions

S TYPE

L F Left - Front 	R F Right - Front
L R Left - Rear	R R Right - Rear

2 W Wall Hanging Type



BASE SIZE	CABLEVEYOR		S1		S2	
	Bending radius R	Internal dimentions	A	B	A	B
DAR200	R075	55, 60	190	138	190	138
		75, 80	190	138	190	138
DAR250	R075	55, 60	190	138	190	138
		75, 80	190	138	190	138
DAR300	R095	55, 60	190	158	190	158
		75, 80	190	178	190	178

3 NOTE2 Cableveyor Directions

S TYPE

L F Left - Front 	R F Right - Front
L R Left - Rear	R R Right - Rear

NOTE1 This is a minimum space allowance between Cableveyor and external interference when robot drives.
NOTE2 For the information of Cable veyor of blank, please contact a distributor or our company.

NOTE1 로봇을 구동할 때에 케이블베어와 외부 간섭과의 최소여유치수입니다.
NOTE2 빈칸의 케이블베어 장착은 영업점 및 폐사에 문의 바랍니다.

ALPHA ROBOT SPECIFICATIONS

Product		Rated Output	Ball Screw ※1		Max. Speed		Max. Load (H)					Max. Load (V)				
		w	E.D	Lead	mm/s		50	100	150	200	kg	50	100	150	200	kg
DAR SERIES	200	400	ϕ15	10	N	500					60					40
		400	ϕ15	20	H	1000					45					20
	250	400	ϕ15	10	N	500					80					40
		400	ϕ15	20	H	1000					45					18
	300	750	ϕ20 ※2	10	N	500					120					60
		750	ϕ20 ※2	20	H	1000					90					36
		750	ϕ25 ※2	10	N	500					120					60
		750	ϕ25 ※2	20	H	1000					90					36

※1 : Accuracy class of Ball screw is C7　※2 : Below stroke 800mm, Φ20 applied. Above stroke 800mm, Φ25 applied

PRO GRAM | mm | mm/s | kg

Repeatability	Max. Stroke ※3																									Page no.
mm	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	mm	
±0.02					500		468	391	301	249																1000	B71.1 ~ 2
±0.02					1000		936	742	602	498																1000	B71.1 ~ 2
±0.02					500		451	359	292	243																1000	B72.1 ~ 2
±0.02					1000		902	718	584	485																1000	B72.1 ~ 2
±0.02						500		454	373	312	264	227	197	173	153	136										1600	B73.1 ~ 2
±0.02						1000		908	746	623	528	454	394	345	305	271	243	219	198	180						2000	B73.1 ~ 2
±0.02						500		486	406	344	296	257	225	199	177											1600	B73.1 ~ 2
±0.02						1000		972	812	689	592	514	450	398	354	317	285	258	235							2000	B73.1 ~ 2

※3 : Figures of Max.Stroke of bar graph indicate Max.Speed of each stroke

Model	DAR200-2S-IN	DAR200-2S-OUT						

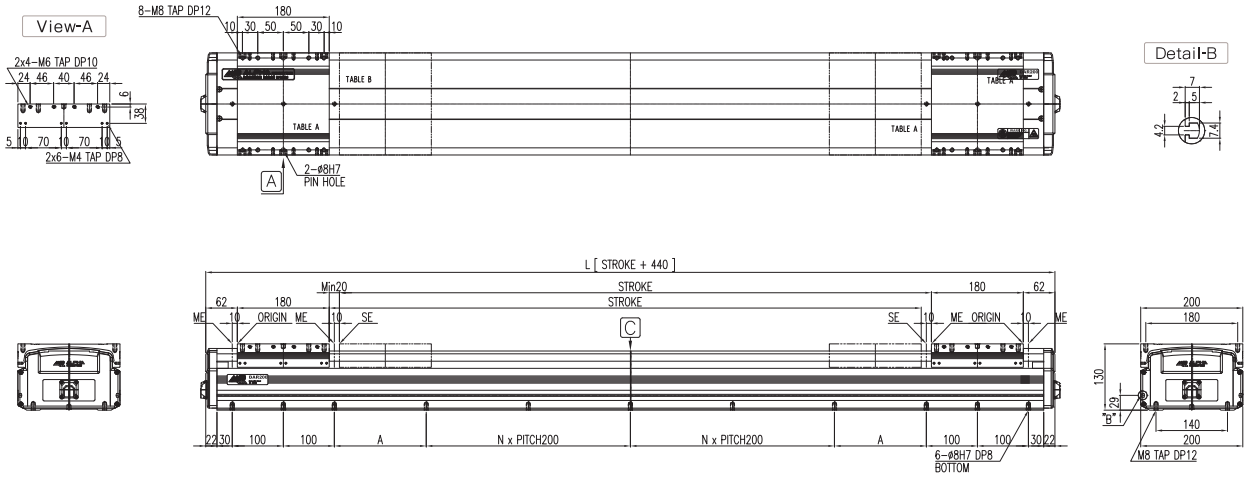
Values of ( ) is in case of speed of 1000mm/sec. / H of Max. Load indicares Horizontal use and V of Max.Load indicates Vertical use.

Specification	Unit	DAR200-2S1/2-40N-IN	
DAR200-2S1		 DAR200-2S2	
Rated Output	W	400W, 3000 min^{-1}	
Max. Speed Note1	mm/s	500 (1000)	
Max. Load Note2	kg	H:60 (45)	V:40 (20)
Stroke Range	mm	100 ~ 1000	
Repeatability	mm	± 0.02	
Drive Type	-	BALL SCREW	

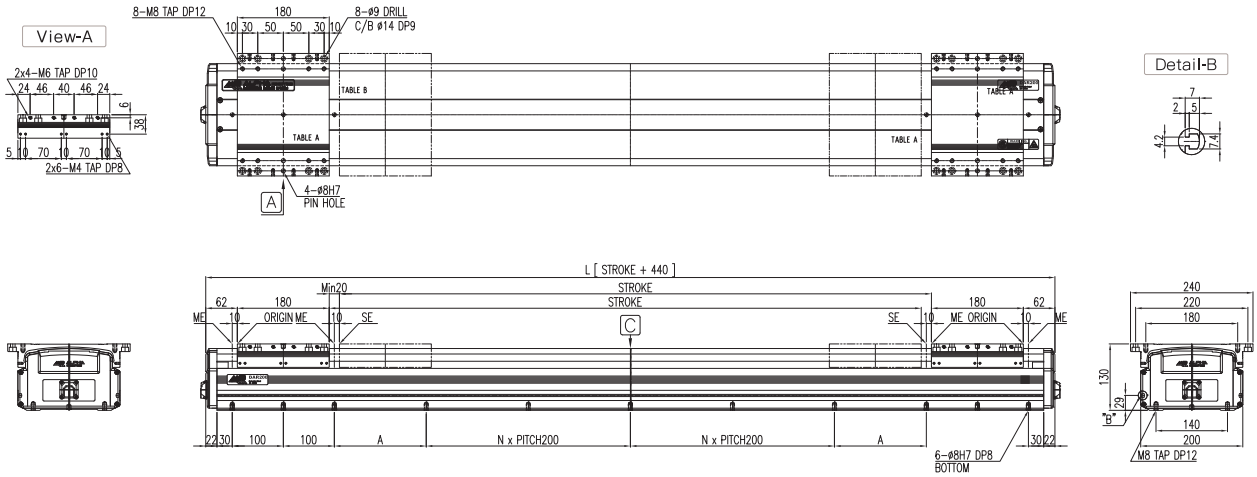
Specification		Unit	Data			
Acceleration		G	0.3			
Load		kg	20	40	50	60
Allowable Overhang Distance - mm	Horizontal Use	0°	800	625	488	395
		45°	800	720	564	462
		90°	800	800	800	800
	Wall Installation Use	0°	800	570	445	362
		45°	800	403	315	256
		90°	800	675	530	430
	Vertical Use	0°	800	630	505	420
		45°	800	403	325	273
		90°	800	630	500	420
Note3	Estimated Condition	Max Speed : 1000 mm/s		Acceleration : 0.3 G (2.94 m/s^2)		
		Life in traveled distance : 30000 km				

DAR200-2S1

* All dimensions in mm



DAR200-2S2



Weight	Model \ Stroke	Units	100	200	300	400	500	600	700	800	900	1000	Offset(100)
	DAR200-2S-40N-IN	kg	36.37	38.95	41.53	44.11	46.69	49.27	51.85	54.43	57.01	59.59	2.58

Speed	Model \ Stroke	Units	100	200	300	400	500	600	700	800	900	1000	Offset(100)
	DAR200-2S-40-N	mm/s	500						468	371	301	249	Note4
	DAR200-2S-40-H	mm/s	1000						936	742	602	498	Note4

⚠ CAUTION

Please be careful of surrounding interference when it is returning to origin because of the slide moves to ME. ·ME : Mechanical End ·SE : Stroke End
Standard stroke changes by 50mm distance, and values of "A" change by 25, 50, 75, 100

NOTE1 In case of the short stroke, it may not be reached at maximum speed.
NOTE2 It is changed by operating conditions.
NOTE3 In case of use of products beyond allowable overhang value, it may result in malfunction of products.
NOTE4 Regarding speed of over 1,000 stroke products which are not listed on the table, please refer the Specification(70.7page).

Model	DAR200-2S-IN	DAR200-2S-OUT						

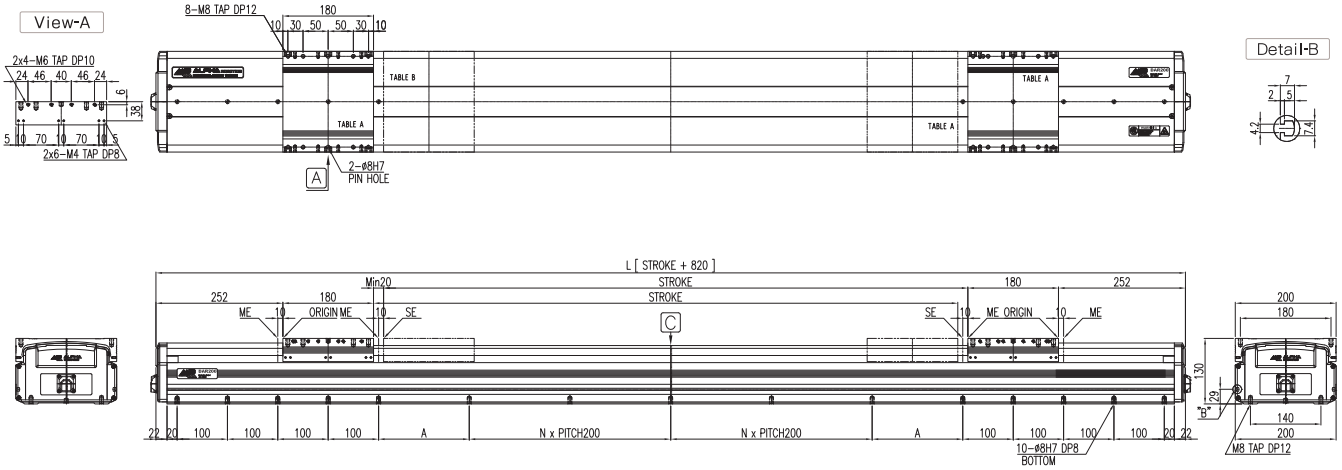
Values of ( ) is in case of speed of 1000mm/sec. / H of Max. Load indicares Horizontal use and V of Max.Load indicates Vertical use.

Specification	Unit	DAR200-2S1/2-40N-OUT	
DAR200-2S1		 DAR200-2S2	
Rated Output	W	400W, 3000 min^{-1}	
Max. Speed Note1	mm/s	500 (1000)	
Max. Load Note2	kg	H:60 (45)	V:40 (20)
Stroke Range	mm	100 ~ 1000	
Repeatability	mm	± 0.02	
Drive Type	-	BALL SCREW	

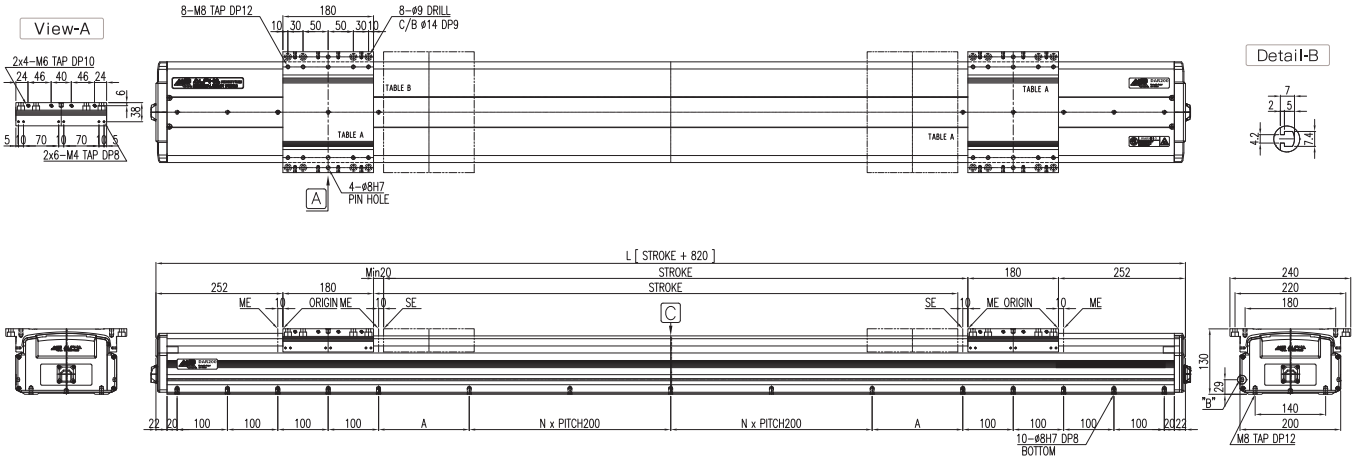
Specification		Unit	Data			
Acceleration		G	0.3			
Load		kg	20	40	50	60
Allowable Overhang Distance - mm	Horizontal Use	0°	800	625	488	395
		45°	800	720	564	462
		90°	800	800	800	800
	Wall Installation Use	0°	800	570	445	362
		45°	800	403	315	256
		90°	800	675	530	430
	Vertical Use	0°	800	630	505	420
		45°	800	403	325	273
		90°	800	630	500	420
Note3	Estimated Condition	Max Speed : 1000 mm/s		Acceleration : 0.3 G (2.94 m/s^2)		
		Life in traveled distance : 30000 km				

DAR200-2S1

* All dimensions in mm



DAR200-2S2



Weight	Model \ Stroke	Units	100	200	300	400	500	600	700	800	900	1000	Offset(100)
	DAR200-2S-40N-OUT	kg	53.86	56.44	59.02	61.60	64.18	66.76	69.34	71.92	74.50	77.08	2.58

Speed	Model \ Stroke	Units	100	200	300	400	500	600	700	800	900	1000	Offset(100)
	DAR200-2S-40-N	mm/s	500						468	371	301	249	Note4
	DAR200-2S-40-H	mm/s	1000						936	742	602	498	Note4

⚠ CAUTION

Please be careful of surrounding interference when it is returning to origin because of the slide moves to ME. ·ME : Mechanical End ·SE : Stroke End
Standard stroke changes by 50mm distance, and values of "A" change by 25, 50, 75, 100

NOTE1 In case of the short stroke, it may not be reached at maximum speed.
NOTE2 It is changed by operating conditions.
NOTE3 In case of use of products beyond allowable overhang value, it may result in malfunction of products.
NOTE4 Regarding speed of over 1,000 stroke products which are not listed on the table, please refer the Specification(70.7page).

Model	DAR250-2S-IN	DAR250-2S-OUT						

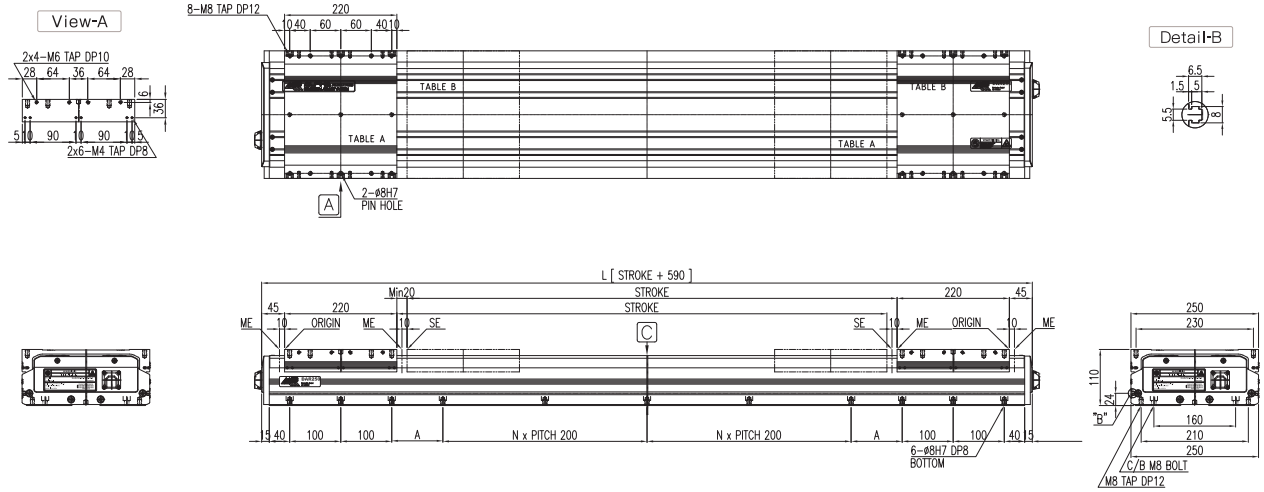
Values of ( ) is in case of speed of 1000mm/sec. / H of Max. Load indicares Horizontal use and V of Max.Load indicates Vertical use.

Specification	Unit	DAR250-2S1/2-40N-IN	
DAR250-2S1		 DAR250-2S2	
Rated Output	W	400W, 3000 min^{-1}	
Max. Speed Note1	mm/s	500 (1000)	
Max. Load Note2	kg	H:80 (45)	V:40 (18)
Stroke Range	mm	100 ~ 1000	
Repeatability	mm	± 0.02	
Drive Type	-	BALL SCREW	

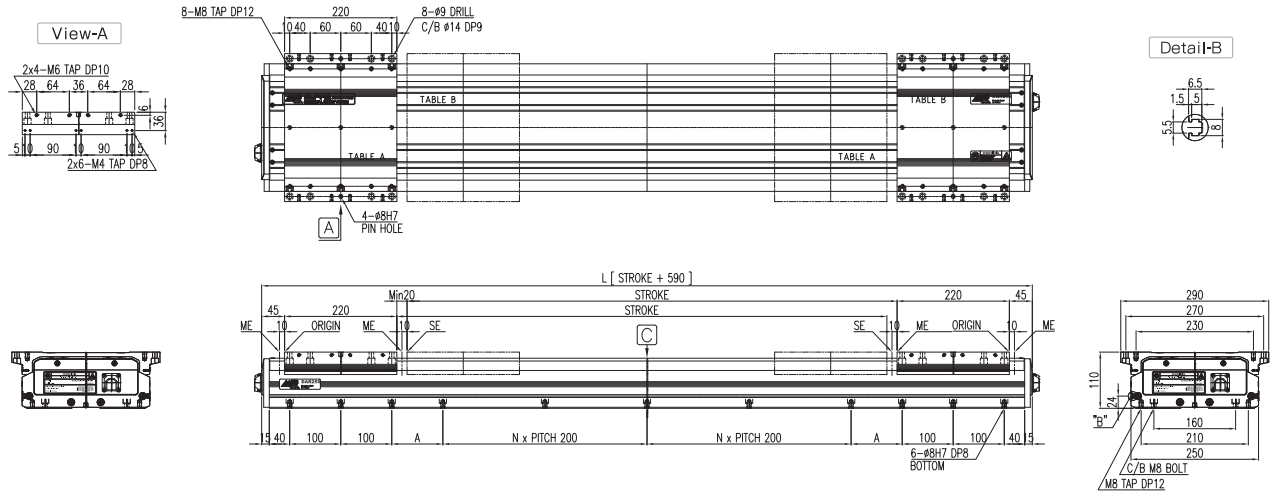
Specification	Unit	Data			
Acceleration	G	0.3			
Load	kg	20	40	60	80
Allowable Overhang Distance - mm: Horizontal Use	0°	900	900	790	575
	45°	900	900	900	660
	90°	900	900	900	900
Wall Installation Use	0°	900	900	670	485
	45°	900	767	494	358
	90°	900	900	875	630
Vertical Use	0°	900	900	745	560
	45°	900	728	481	364
	90°	900	900	740	560
Note3 Estimated Condition	Max Speed : 1000 mm/s	Acceleration : 0.3 G (2.94 m/s^2)			
	Life in traveled distance : 30000 km				

DAR250-2S1

* All dimensions in mm



DAR250-2S2



Weight	Model \ Stroke	Units	100	200	300	400	500	600	700	800	900	1000	Offset(100)
	DAR250-2S-40N-IN	kg	49.93	52.87	55.81	58.75	61.69	64.63	67.57	70.51	73.45	76.39	2.94

Speed	Model \ Stroke	Units	100	200	300	400	500	600	700	800	900	1000	Offset(100)
	DAR250-2S-40-N	mm/s	500						451	359	292	243	Note4
	DAR250-2S-40-H	mm/s	1000						902	718	584	485	Note4

⚠ CAUTION

Please be careful of surrounding interference when it is returning to origin because of the slide moves to ME. ·ME : Mechanical End ·SE : Stroke End
Standard stroke changes by 50mm distance, and values of "A" change by 25, 50, 75, 100

NOTE1 In case of the short stroke, it may not be reached at maximum speed.
NOTE2 It is changed by operating conditions.
NOTE3 In case of use of products beyond allowable overhang value, it may result in malfunction of products.
NOTE4 Regarding speed of over 1,000 stroke products which are not listed on the table, please refer the Specification(70.7page).

Model	DAR250-2S-IN	DAR250-2S-OUT						

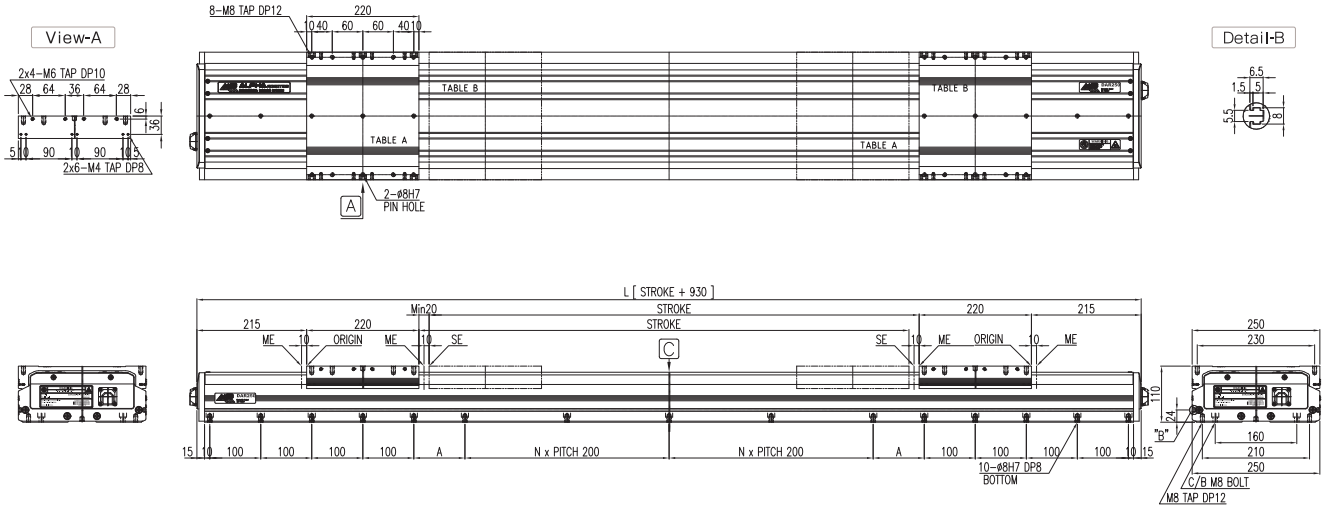
Values of ( ) is in case of speed of 1000mm/sec. / H of Max. Load indicares Horizontal use and V of Max.Load indicates Vertical use.

Specification		Unit	DAR250-2S1/2-40N-OUT	
DAR250-2S1				
DAR250-2S2				
Rated Output		W	400W, 3000 min^{-1}	
Max. Speed	Note1	mm/s	500 (1000)	
Max. Load	Note2	kg	H:80 (45)	V:40 (18)
Stroke Range		mm	100 ~ 1000	
Repeatability		mm	± 0.02	
Drive Type		-	BALL SCREW	

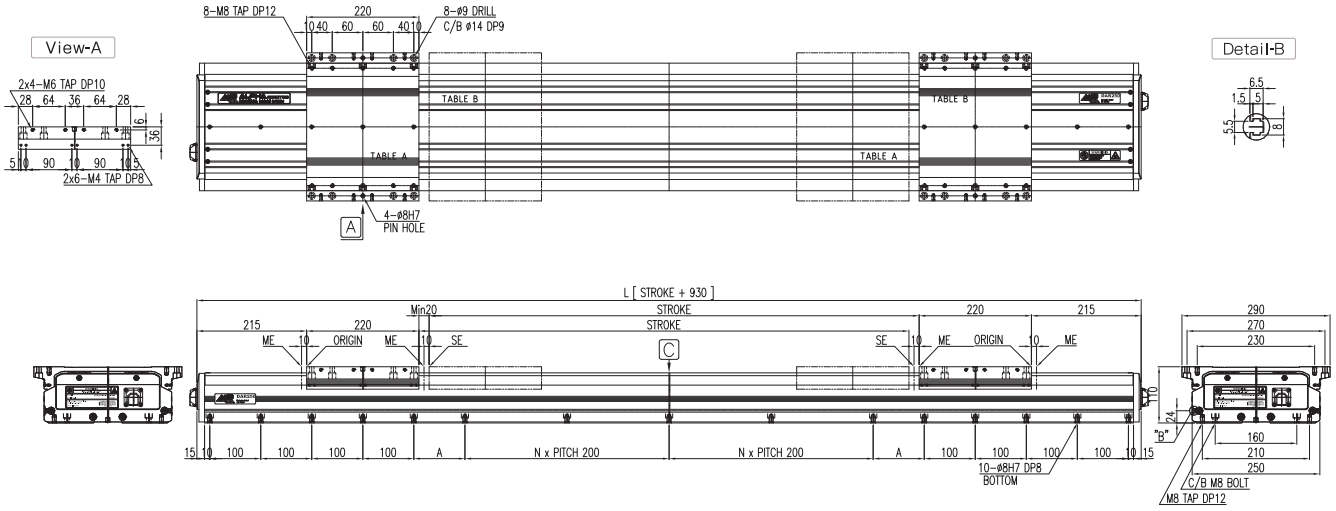
Specification		Unit	Data			
Acceleration		G	0.3			
Load		kg	20	40	60	80
Allowable Overhang Distance - mm	Horizontal Use	0°	900	900	790	575
		45°	900	900	900	660
		90°	900	900	900	900
	Wall Installation Use	0°	900	900	670	485
		45°	900	767	494	358
		90°	900	900	875	630
	Vertical Use	0°	900	900	745	560
		45°	900	728	481	364
		90°	900	900	740	560
Note3	Estimated Condition		Max Speed : 1000 mm/s		Acceleration : 0.3 G (2.94 m/s²)	
			Life in traveled distance : 30000 km			

DAR250-2S1

* All dimensions in mm



DAR250-2S2



Weight	Model \ Stroke	Units	100	200	300	400	500	600	700	800	900	1000	Offset(100)
	DAR250-2S-40N-OUT	kg	66.95	69.89	72.83	75.77	78.71	81.65	84.59	87.53	90.47	93.41	2.94

Speed	Model \ Stroke	Units	100	200	300	400	500	600	700	800	900	1000	Offset(100)
	DAR250-2S-40-N	mm/s	500						451	359	292	243	Note4
	DAR250-2S-40-H	mm/s	1000						902	718	584	485	Note4

⚠ CAUTION

Please be careful of surrounding interference when it is returning to origin because of the slide moves to ME. ·ME : Mechanical End ·SE : Stroke End
Standard stroke changes by 50mm distance, and values of "A" change by 25, 50, 75, 100

NOTE1 In case of the short stroke, it may not be reached at maximum speed.
NOTE2 It is changed by operating conditions.
NOTE3 In case of use of products beyond allowable overhang value, it may result in malfunction of products.
NOTE4 Regarding speed of over 1,000 stroke products which are not listed on the table, please refer the Specification(70.7page).

Model | **DAR300-2S-IN** | DAR300-2S-OUT

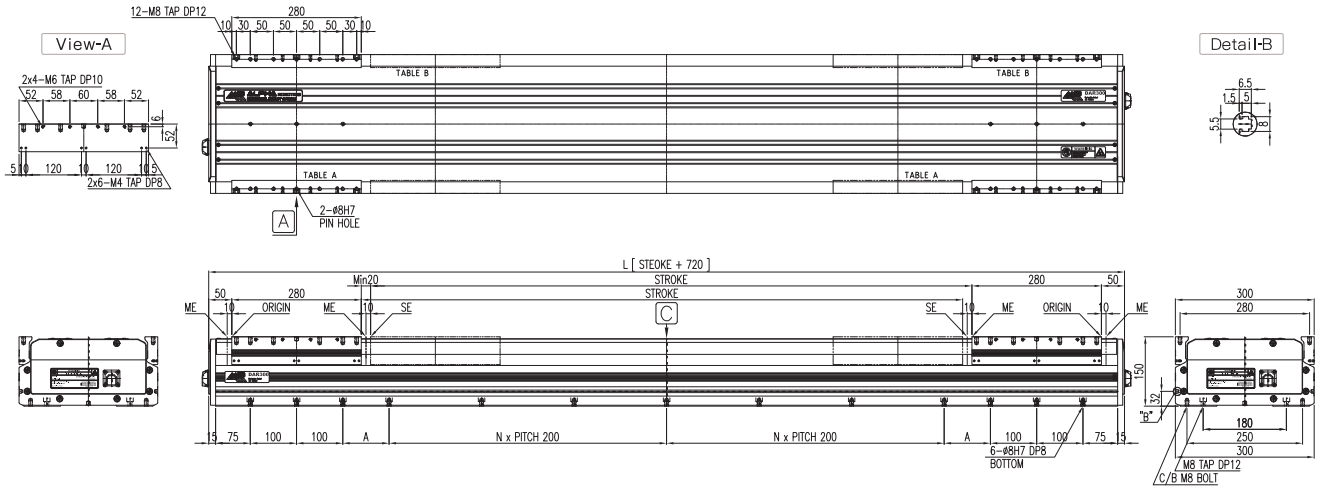
Values of ( ) is in case of speed of 1000mm/sec. / H of Max. Load indicares Horizontal use and V of Max.Load indicates Vertical use.

Specification		Unit	DAR300-2S1/2-75N-IN
DAR300-2S1 / DAR300-2S2			
Rated Output		W	750W, 3000 min^{-1}
Max. Speed	Note1	mm/s	500 (1000)
Max. Load	Note2	kg	H:120 (100) / V:60 (36)
Stroke Range		mm	100 ~ 1600 (2000)
Repeatability		mm	± 0.02
Drive Type		-	BALL SCREW

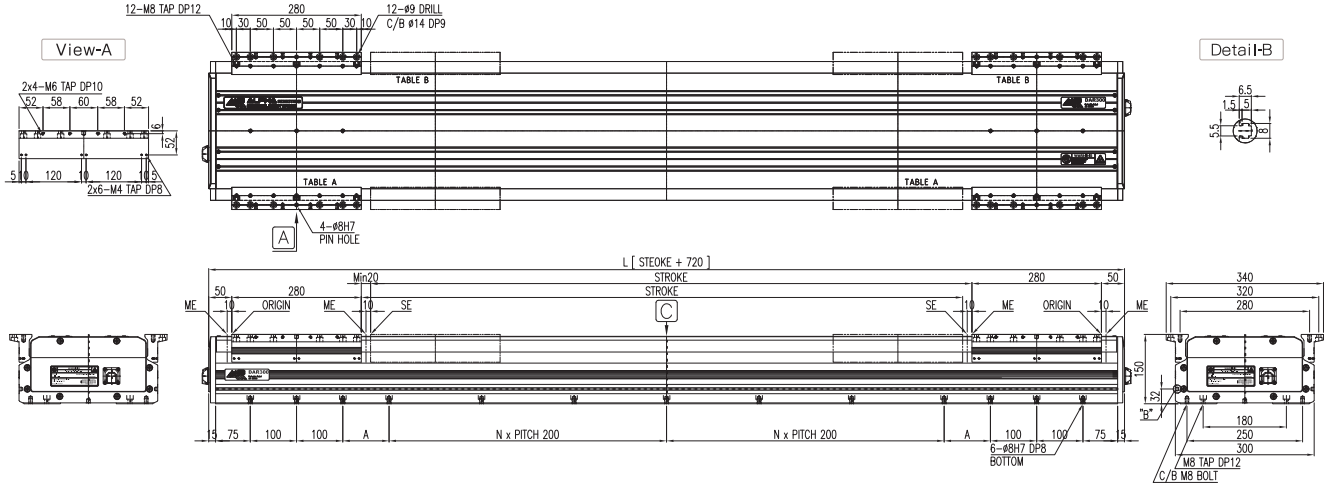
Specification		Unit	Data			
Acceleration		G	0.3			
Load		kg	40	60	100	120
Allowable Overhang Distance - mm	Horizontal Use	0°	1000	1000	960	785
		45°	1000	1000	1000	930
		90°	1000	1000	1000	1000
	Wall Installation Use	0°	1000	1000	795	650
		45°	1000	1000	579	475
		90°	1000	1000	1000	820
	Vertical Use	0°	1000	1000	890	740
		45°	1000	962	572	481
		90°	1000	1000	890	740
Note3	Estimated Condition	Max Speed : 2000 mm/s	Acceleration : 0.3 G (2.94 m/s^2)			
		Life in traveled distance : 30000 km				

DAR300-2S1

* All dimensions in mm



DAR300-2S2



Weight	Model \ Stroke	Units	100	200	300	400	500	600	700	800	900	1000	Offset(100)
	DAR300-2S-75N-IN	kg	99.71	104.55	109.39	114.23	119.07	123.91	128.75	133.59	138.43	143.27	4.84

Speed	Model \ Stroke	Units	100	200	300	400	500	600	700	800	900	1000	Offset(100)
	DAR300-2S-75-N	mm/s	500							454	373	312	Note4
	DAR300-2S-75-H	mm/s	1000							908	746	623	Note4

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NOTE4 Regarding speed of over 1,000 stroke products which are not listed on the table, please refer the Specification(70.7page).

Model	DAR300-2S-IN	DAR300-2S-OUT						

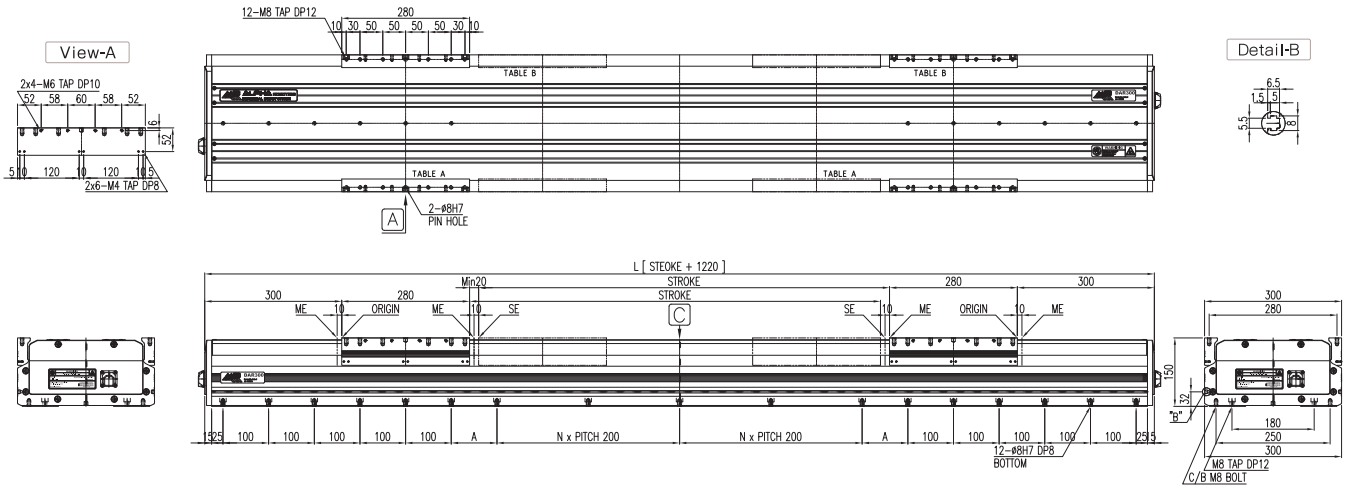
Values of ( ) is in case of speed of 1000mm/sec. / H of Max. Load indicares Horizontal use and V of Max.Load indicates Vertical use.

Specification		Unit	DAR300-2S1/2-75N-OUT	
DAR300-2S1			DAR300-2S2 	
Rated Output		W	750W, 3000 min^{-1}	
Max. Speed	Note1	mm/s	500 (1000)	
Max. Load	Note2	kg	H:120 (100)	V:60 (36)
Stroke Range		mm	100 ~ 1600 (2000)	
Repeatability		mm	± 0.02	
Drive Type		-	BALL SCREW	

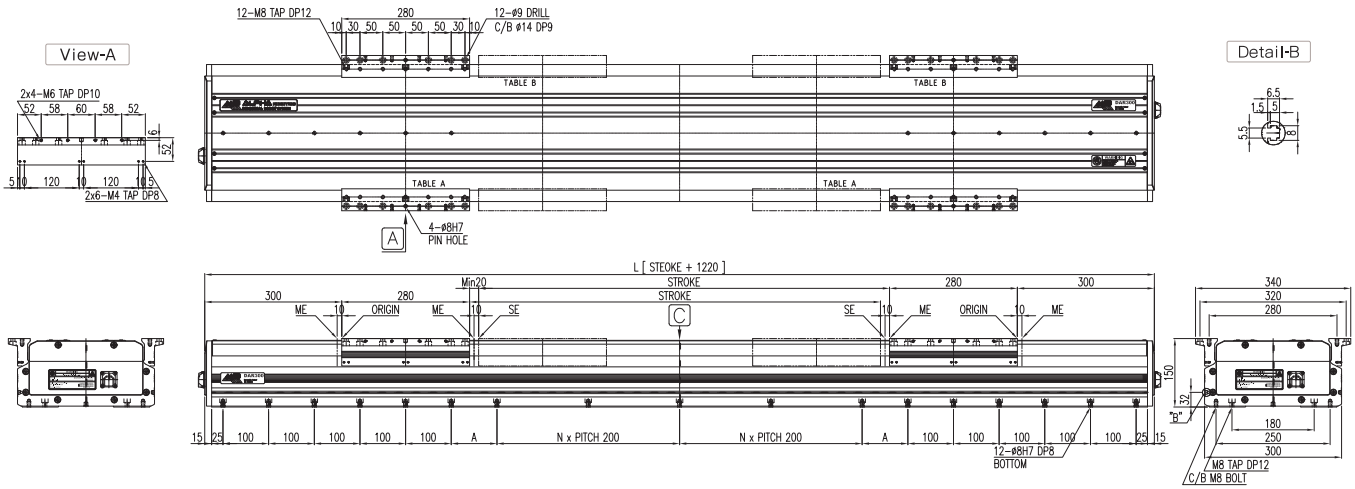
Specification		Unit	Data			
Acceleration		G	0.3			
Load		kg	40	60	100	120
Allowable Overhang Distance - mm	Horizontal Use 	0°	1000	1000	960	785
		45°	1000	1000	1000	930
		90°	1000	1000	1000	1000
	Wall Installation Use 	0°	1000	1000	795	650
		45°	1000	1000	579	475
		90°	1000	1000	1000	820
	Vertical Use 	0°	1000	1000	890	740
		45°	1000	962	572	481
		90°	1000	1000	890	740
Note3	Estimated Condition	Max Speed : 2000 mm/s		Acceleration : 0.3 G (2.94 m/s^2)		
		Life in traveled distance : 30000 km				

DAR300-2S1

* All dimensions in mm



DAR300-2S2



Weight	Model \ Stroke	Units	100	200	300	400	500	600	700	800	900	1000	Offset(100)
	DAR300-2S-75N-OUT	kg	143.84	148.68	153.52	158.36	163.20	168.04	172.88	177.72	182.56	187.40	4.84

Speed	Model \ Stroke	Units	100	200	300	400	500	600	700	800	900	1000	Offset(100)
	DAR300-2S-75-N	mm/s	500							454	373	312	Note4
	DAR300-2S-75-H	mm/s	1000							908	746	623	Note4

⚠ CAUTION

Please be careful of surrounding interference when it is returning to origin because of the slide moves to ME. ·ME : Mechanical End ·SE : Stroke End
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