



X2 TECHNOLOGY

A Phoenix Mecano Brand

Lifting column

A-series

A13

A23

Max 12.000 N



Made in Sweden

Description

The A13 and A23 columns are very robust and stable lifting columns that suits a broad range of applications. These comes with our patented drive which enables extreme loads, high speed, and long strokes. With the long-life pads, the lifting system does not require any maintenance.



 Long lifetime

 High speed

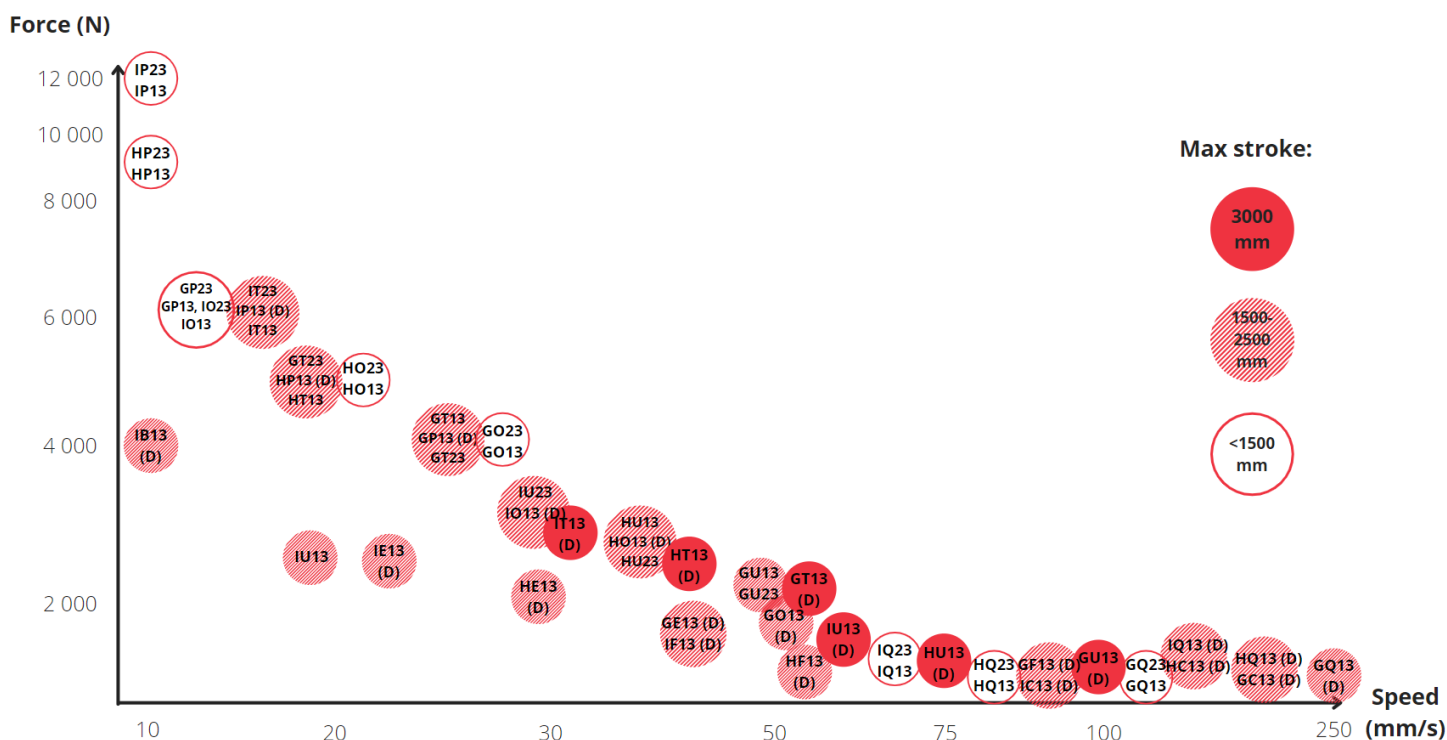
 Great force

Features

Push
Encoder
Limit switch
Cable out small tube
(large tube if R=S+60)

Options

Pull
Potentiometer
Customized top/bottom plates



- The columns are divided in two categories (3-sectioned A13 and 2-sectioned A23) with two subcategories, S and D.
- (D) on the diagram means DA13, the others are SA13 or SA23.

SA13 – 3 sections

	SA-GQ13	SA-HQ13	SA-IQ13	SA-GU13	SA-HU13	SA-IU13	SA-GO13
Force, max push*	400 N	800 N	1.200 N	2.000 N	2.800 N	3.500 N	4.000 N
Self-locking force**	400 N	800 N	1.200 N	2.000 N	2.800 N	3.500 N	4.000 N
Speed @max load	125 mm/s	85 mm/s	65 mm/s	50 mm/s	35 mm/s	18 mm/s	26 mm/s
Stroke, S (longer strokes on request)	1.250 mm			1.500 mm			1.250 mm
Retracted length, R***	R = S + 60 mm						
Duty cycle [%]	20% (2 min ON / 8 min OFF)						
Voltage				24 VDC			
Ambient temp	+10°C to +40°C						
Current @max load				8 A			
IP Class				IP 30			
Safety factor Static centric load @ max stroke & load*	15	8	5,5	6	4,5	3,5	1,8

	SA-GT13	SA-HO13	SA-HT13	SA-GP13	SA-IO13	SA-IT13	SA-HP13	SA-IP13
Force, max push*	4.000 N	5.000 N		6.000 N			9.000 N	12.000 N
Self-locking force**	4.000 N	5.000 N		6.000 N			9.000 N	12.000 N
Speed @max load	26 mm/s	18 mm/s	18 mm/s	13 mm/s	14 mm/s		9 mm/s	7 mm/s
Stroke, S (longer strokes on request)	1.500 mm	1.000 mm	1.500 mm	1.000 mm	1.250 mm	1.500 mm	800 mm	600 mm
Retracted length, R***	R = S + 60 mm							
Duty cycle [%]	20% (2 min ON / 8 min OFF)							
Voltage	24 VDC							
Ambient temp	+10°C to +40°C							
Current @max load	8 A							
IP Class	IP 30							
Safety factor Static centric load @ max stroke & load*	3	1,8	2,5	2	1,25	2	1,8	1,8

DA13 – 3 sections

	DA-GQ13	DA-GC13	DA-HC13	DA-HQ13	DA-IC13	DA-IQ13	DA-GF13
Force, max push*	200 N	300 N	400 N		600 N		750 N
Self-locking force**	1.000 N	600 N	600 N	1.000 N	600 N	1.000 N	1.500 N
Speed @max load	250 mm/s	160 mm/s	115 mm/s	170 mm/s	90 mm/s	130 mm/s	80 mm/s
Stroke, S (longer strokes on request)	2.500 mm	1.500 mm		2.500 mm	1.500 mm	2.500 mm	1.500 mm
Retracted length, R***	R = S/2 + 250 mm	R = S/2 + 200 mm	R = S/2 + 200 mm	R = S/2 + 250 mm	R = S/2 + 200 mm	R = S/2 + 250 mm	R = S/2 + 200 mm
Duty cycle [%]	20% (2 min ON / 8 min OFF)						
Voltage				24 VDC			
Ambient temp	+10°C to +40°C						
Current @max load				8 A			
IP Class				IP 30			
Safety factor Static centric load @ max stroke & load*	15	8	6	8	4,5	5,5	8

* See diagrams on page 8-11

** Only applied when connected by short circuit

*** Longer retracted length enables more offset load, see diagrams on page 8-11

	DA-HF13	DA-GU13	DA-IF13	DA-HU13	DA-GE13	DA-IU13
Force, max push*	1.000 N		1.400 N		1.500 N	1.750 N
Self-locking force**	1.500 N	1.000 N	2.000 N	1.400 N	1.500 N	1.750 N
Speed @max load	55 mm/s	100 mm/s	40 mm/s	70 mm/s	40 mm/s	55 mm/s
Stroke, S (longer strokes on request)	1.500 mm	3.000 mm	1.500 mm	3.000 mm	1.500 mm	3.000 mm
Retracted length, R***	R= S/2 + 200 mm	R = S/2 + 250 mm	R= S/2 + 200 mm	R = S/2 + 250 mm	R= S/2 + 200 mm	R= S/2 + 250 mm
Duty cycle [%]	20% (2 min ON / 8 min OFF)					
Voltage	24 VDC					
Ambient temp	+10°C to +40°C					
Current @max load	8 A					
IP Class	IP 30					
Safety factor Static centric load @ max stroke & load*	6		4,5		5,5	3,5

	DA-HE13	DA-GO13	DA-GT13	DA-IE13	DA-HO13	DA-HT13
Force, max push*	2.000 N			2 500 N		
Self-locking force**	2.000 N			2 500 N		
Speed @max load	29 mm/s	52 mm/s		23 mm/s	36 mm/s	36 mm/s
Stroke, S (longer strokes on request)	1.500 mm	2.500 mm	3.000 mm	1.500 mm	2.100 mm	3.000 mm
Retracted length, R***	R = S/2 + 200 mm		R= S/2 + 250 mm	R = S/2 + 200 mm		R =S/2+250
Duty cycle [%]	20% (2 min ON / 8 min OFF)					
Voltage	24 VDC					
Ambient temp	+10°C to +40°C					
Current @max load	8 A					
IP Class	IP 30					
Safety factor Static centric load @ max stroke & load*	4	1,8	3	3,4	1,8	2,5

	DA-IO13	DA-IT13	DA-IB13	DA-GP13	DA-HP13	DA-IP13
Force, max push*	3.000 N		4.000 N		5.000 N	6.000 N
Self-locking force**	3.000 N		4.000 N		5.000 N	6.000 N
Speed @max load	28 mm/s		10 mm/s	26 mm/s	18 mm/s	14 mm/s
Stroke, S (longer strokes on request)	1.900 mm	3.000 mm	1.500 mm	2.500 mm	2.100 mm	1.900 mm
Retracted length, R***	R=S/2+200	R =S/2+250	R = S/2 + 500			
Duty cycle [%]	20% (2 min ON / 8 min OFF)					
Voltage	24 VDC					
Ambient temp	+10°C to +40°C					
Current @max load	8 A					
IP Class	IP 30					
Safety factor Static centric load @ max stroke & load*	1,8	2	4,5	1,8	1,8	1,8

* See diagrams on page 8-11

** Only applied when connected by short circuit

*** Longer retracted length enables more offset load, see diagrams on page 8-11

SA23 – 2 sections

	SA-GQ23	SA-HQ23	SA-IQ23	SA-GU23	SA-HU23
Force, max push*	400 N	800 N	1.200 N	2.000 N	2.800 N
Self-locking force**	400 N	800 N	1.200 N	2.000 N	2.800 N
Speed @max load	125 mm/s	85 mm/s	65 mm/s	50 mm/s	35 mm/s
Stroke, S (longer strokes on request)	1.250 mm			1.500 mm	
Retracted length, R***	R = S + 60			R = S + 120	
Duty cycle [%]	20% (2 min ON / 8 min OFF)				
Voltage	24 VDC				
Ambient temp	+10°C to +40°C				
Current @max load	8 A				
IP Class	IP 30				

	SA-IU23	SA-GT23	SA-GO23	SA-HT23	SA-HO23
Force, max push*	3.500 N	4.000 N		5.000 N	
Self-locking force**	3.500 N	4.000 N		5.000 N	
Speed @max load	29 mm/s	26 mm/s		18 mm/s	
Stroke, S (longer strokes on request)	1.500 mm	1.500 mm	1.250 mm	1.500 mm	1.000 mm
Retracted length, R***	R = S + 120				
Duty cycle [%]	20% (2 min ON / 8 min OFF)				
Voltage	24 VDC				
Ambient temp	+10°C to +40°C				
Current @max load	8 A				
IP Class	IP 30				
Safety factor Static centric load @ max stroke & load*	3,5	3	1,8	2,5	1,8

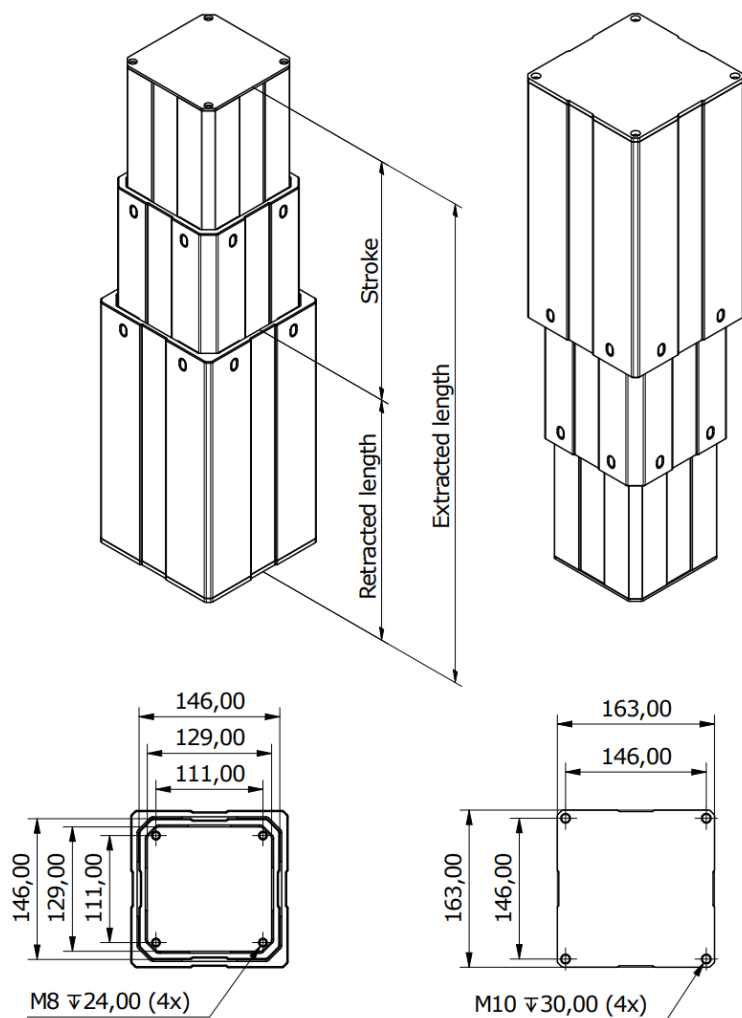
	SA-IT23	SA-IO23	SA-GP23	SA-HP23	SA-IP23
Force, max push*	6.000 N			9.000 N	12.000 N
Self-locking force**	6.000 N			9.000 N	12.000 N
Speed @max load	14 mm/s		13 mm/s	9 mm/s	7 mm/s
Stroke, S (longer strokes on request)	1.500 mm	900 mm	1.000 mm	800 mm	600 mm
Retracted length, R***	R = S + 120				
Duty cycle [%]	20% (2 min ON / 8 min OFF)				
Voltage	24 VDC				
Ambient temp	+10°C to +40°C				
Current @max load	8 A				
IP Class	IP 30				
Safety factor Static centric load @ max stroke & load*	2	1,8	2	1,8	1,8

* See diagrams on page 8-11

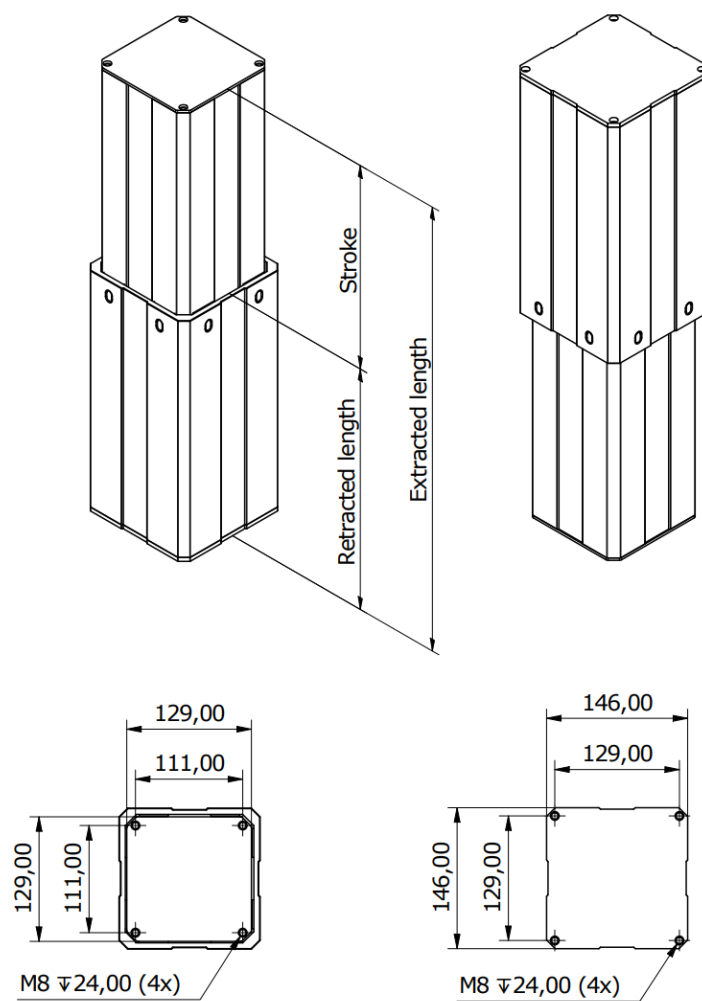
** Only applied when connected by short circuit

*** Longer retracted length enables more offset load, see diagrams on page 8-11

Technical drawing A13



Technical drawing A23



Pin layout



8 pin JS-1149-08 Male

Connectors

	Description
1.	Not in use
2.	Not in use
3.	Not in use
4.	Motor+
5.	Not in use
6.	Not in use
7.	Not in use
8.	Motor-

Encoders

SA13 3 sections

Pulse/mm, dual channel A+B	SA-GQ13	SA-HQ13	SA-IQ13	SA-GU13	SA-HU13	SA-IU13	SA-GO13
G01 [p/mm]	1,7	2,4	3,06	4,25	6	7,65	8,5
G02 [p/mm]	3,4	4,8	6,12	8,5	12	15,3	17
G04 [p/mm]	435,2	614,4	783,4	1088	1536	1958,4	2176
G05 [p/mm]	85	120	153	212,5	300	382,5	425

Pulse/mm, dual channel A+B	SA-GT13	SA-HO13	SA-HT13	SA-GP13	SA-IO13	SA-IT13	SA-HP13	SA-IP13
G01 [p/mm]	8,5	12	12	17	15,3	15,3	24	30,6
G02 [p/mm]	17	24	24	34	30,6	30,6	48	61,2
G04 [p/mm]	2176	3072	3072	4352	3916,8	3916,8	6144	7833,6
G05 [p/mm]	425	600	600	850	765	765	1200	1530

DA13 3 sections

Pulse/mm, dual channel A+B	DA-GQ13	DA-GC13	DA-HC13	DA-HQ13	DA-IC13	DA-IQ13	DA-GF13
G01 [p/mm]	0,8	0,9	1,3	1,2	1,7	1,5	2,6
G02 [p/mm]	1,7	1,9	2,7	2,4	3,4	3	5,3
G04 [p/mm]	217,6	247,2	349	307,2	445	391,6	680
G05 [p/mm]	42,5	48,3	68,1	60	86,9	76,5	132,8

Pulse/mm, dual channel A+B	DA-HF13	GA-GU13	DA-IF13	DA-HU13	DA-GE13	DA-IU13
G01 [p/mm]	3,7	2,1	4,8	3	5,3	3,8
G02 [p/mm]	7,5	4,3	9,6	6	10,6	7,6
G04 [p/mm]	960	544	1224	768	1360	979,2
G05 [p/mm]	187,5	106,3	239	150	265,6	191,3

Pulse/mm, dual channel A+B	DA-HE13	DA-GO13	DA-GT13	DA-IE13	DA-HO13	DA-HT13
G01 [p/mm]	7,5	4,3	4,3	9,5	6	6
G02 [p/mm]	15	8,5	8,5	19,1	12	12
G04 [p/mm]	1920	1088	1088	2448	1536	1536
G05 [p/mm]	375	212,5	212,5	478,1	300	300

Pulse/mm, dual channel A+B	DA-IO13	DA-IT13	DA-IB13	DA-GP13	DA-HP13	DA-IP13
G01 [p/mm]	7,7	7,7	19,1	8,5	12	15,3
G02 [p/mm]	15,3	15,3	38,2	17	24	30,6
G04 [p/mm]	1958,4	1958,4	4896	2176	3072	3916,8
G05 [p/mm]	382,5	382,5	956,2	425	600	765

SA23 2 sections

Pulse/mm, dual channel A+B	SA-GQ23	SA-HQ23	SA-IQ23	SA-GU23	SA-HU23
G01 [p/mm]	1,7	2,4	3,06	4,25	6
G02 [p/mm]	3,4	4,8	6,12	8,5	12
G04 [p/mm]	435,2	614,4	783,36	1088	1536
G05 [p/mm]	85	120	153	212,5	300

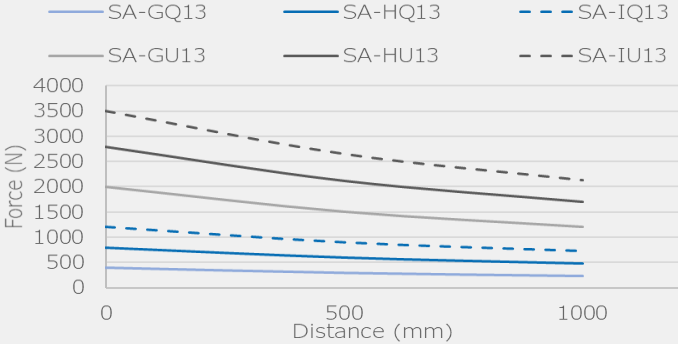
Pulse/mm, dual channel A+B	SA-IU23	SA-GT23	SA-GO23	SA-HT23	SA-HO23
G01 [p/mm]	7,6	8,5	8,5	12	12
G02 [p/mm]	15,3	17	17	24	24
G04 [p/mm]	1958,4	2176	2176	3072	3072
G05 [p/mm]	382,5	425	425	600	600

Pulse/mm, dual channel A+B	SA-IT23	SA-IO23	SA-GP23	SA-HP23	SA-IP23
G01 [p/mm]	15,3	15,3	17	24	30,6
G02 [p/mm]	30,6	30,6	34	48	61,2
G04 [p/mm]	3916,8	3916,8	4352	6144	7833,6
G05 [p/mm]	765	765	850	1200	1530

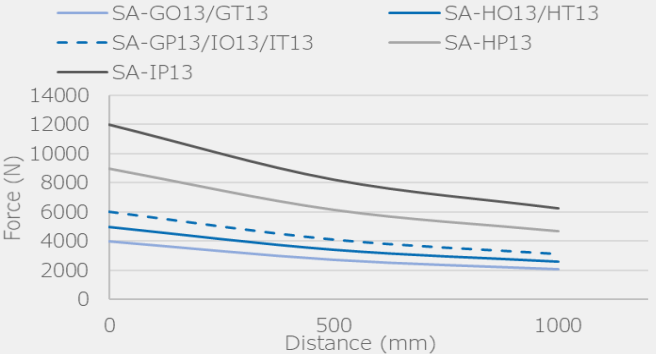
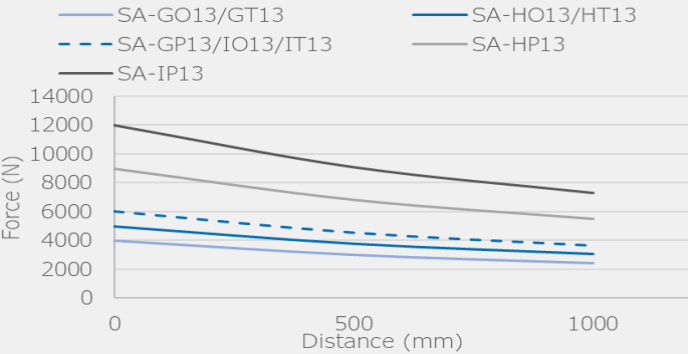
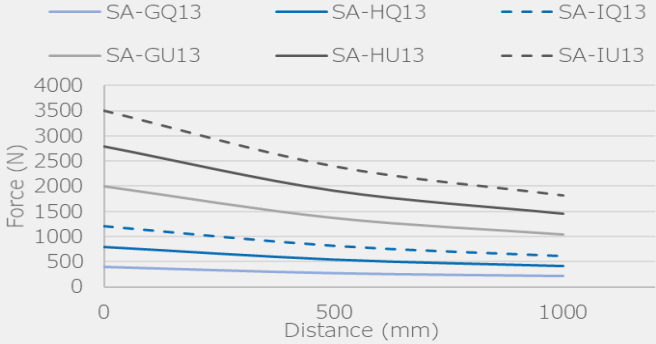
Diagrams – SA13 3 sections

Offset load

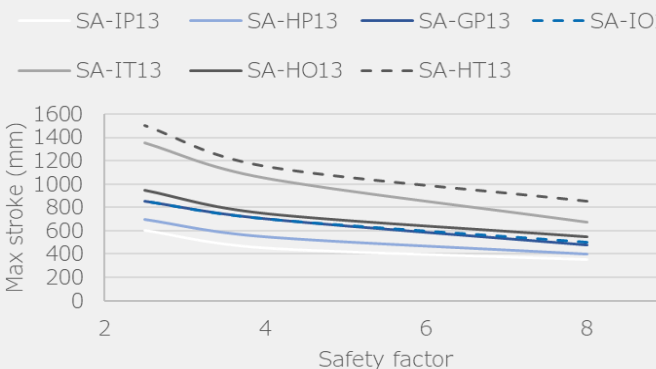
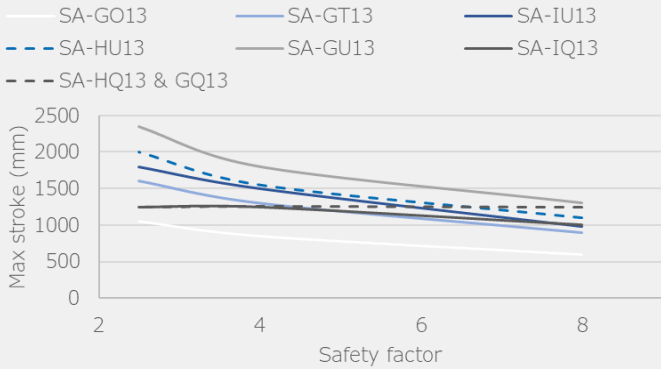
Long retracted length ($R = S + 270 \text{ mm}$)



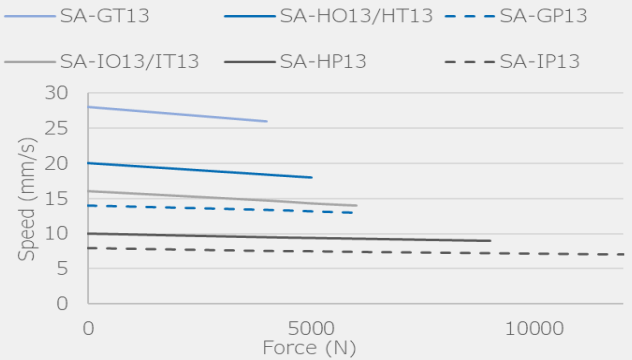
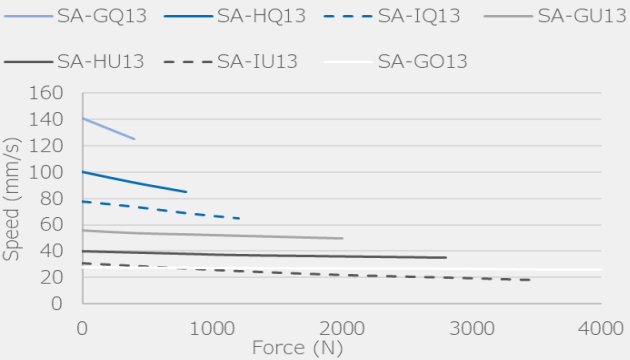
Short retracted length ($R = S + 195 \text{ mm}$)



Safety factor



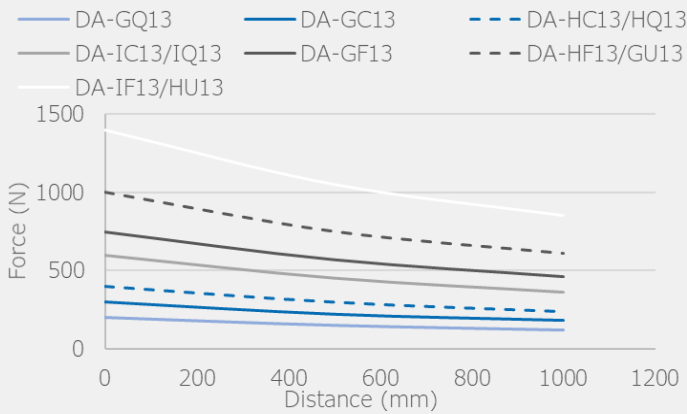
Speed



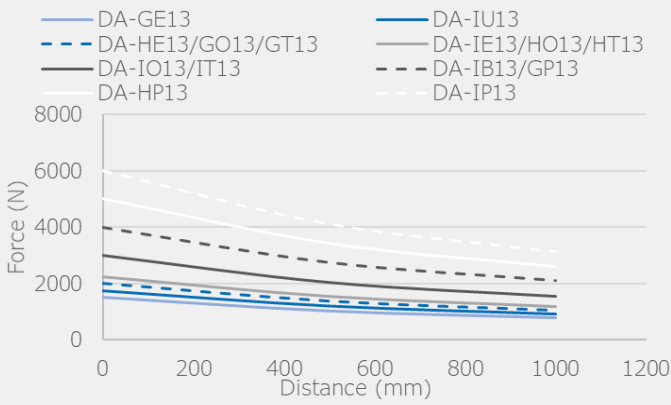
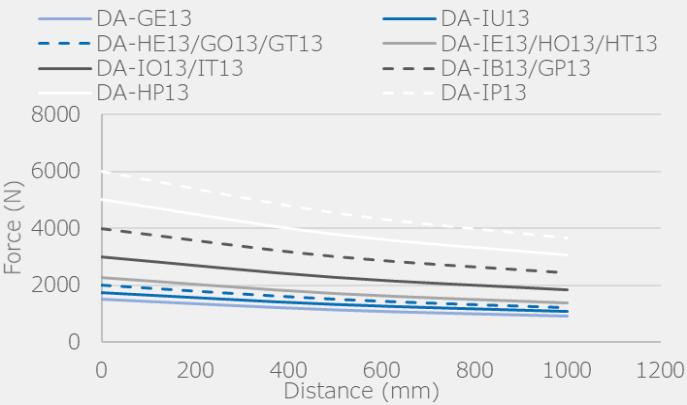
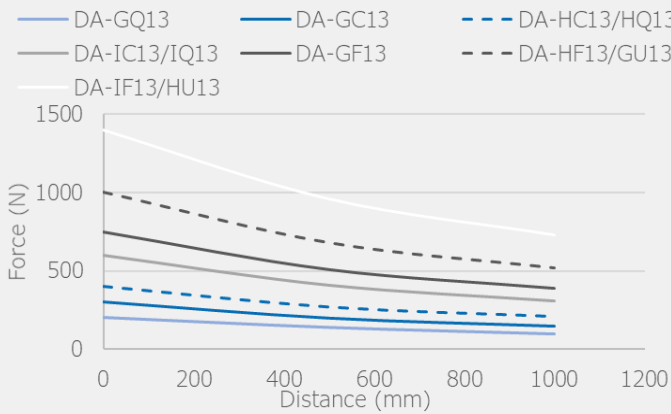
Diagrams – DA13 3 sections

Offset load

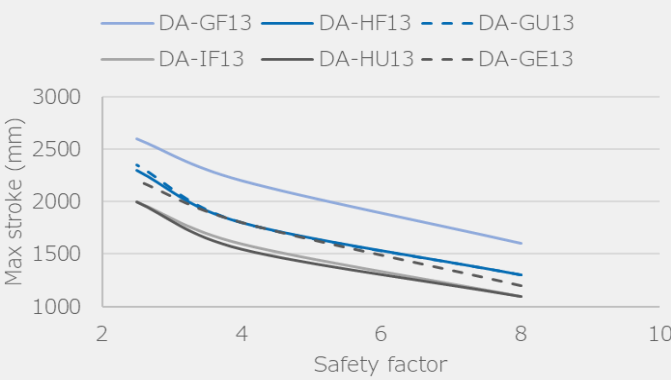
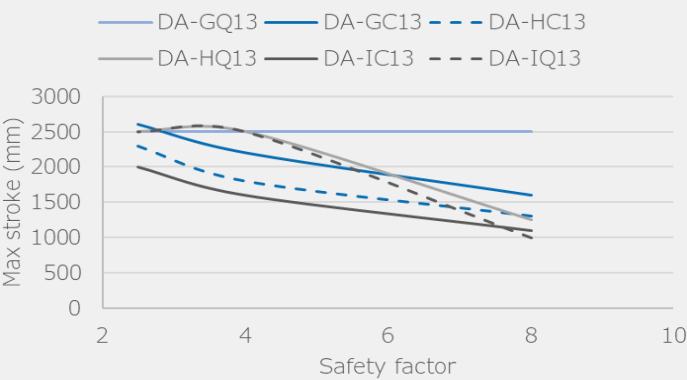
Long retracted length ($R = S + 270\text{ mm}$)



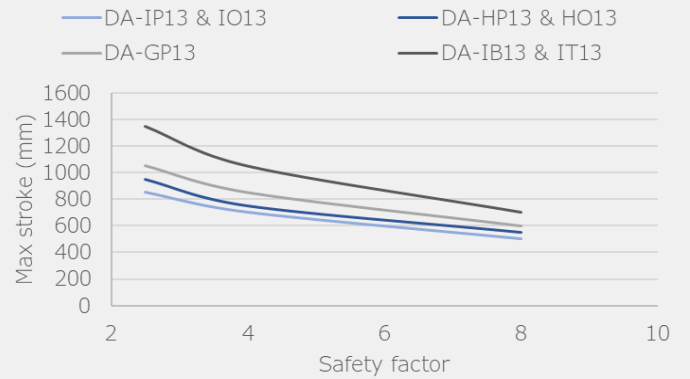
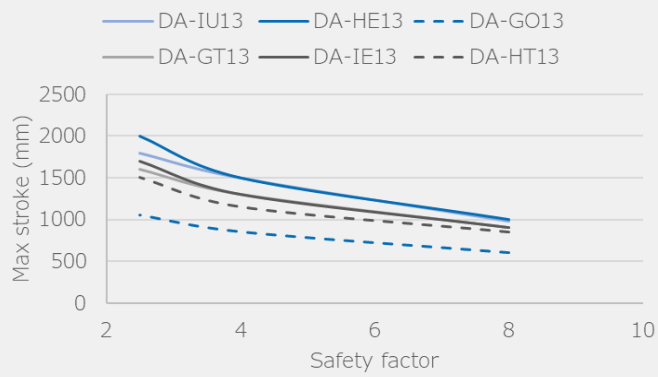
Short retracted length ($R = S + 195\text{ mm}$)



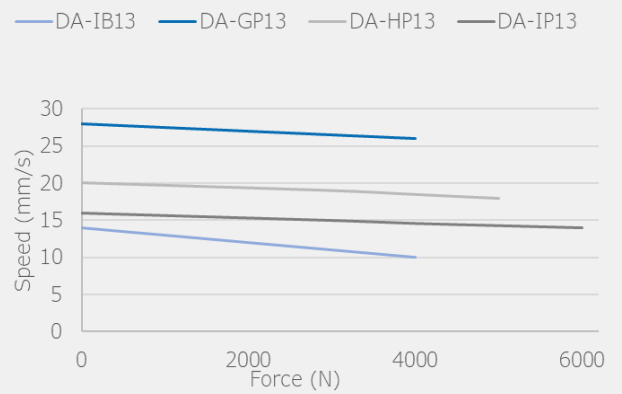
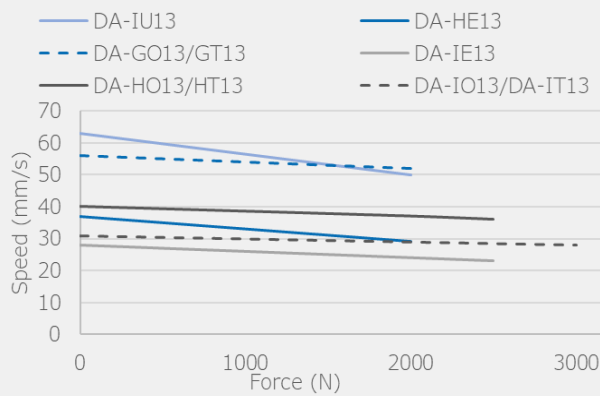
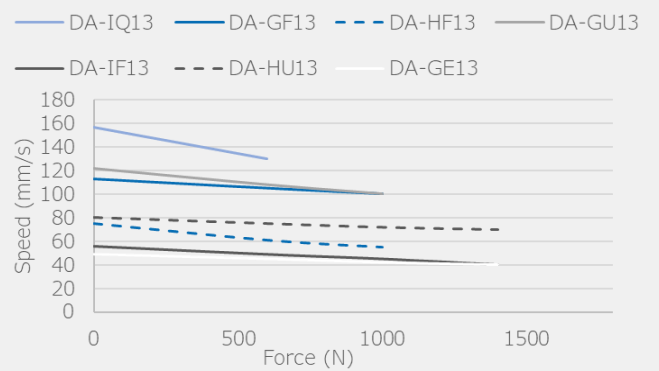
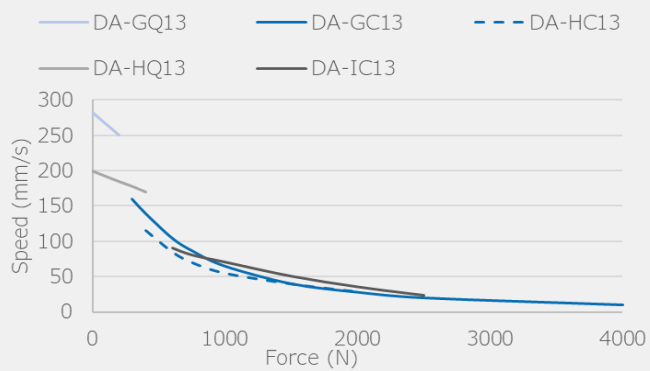
Safety factor



Safety factor

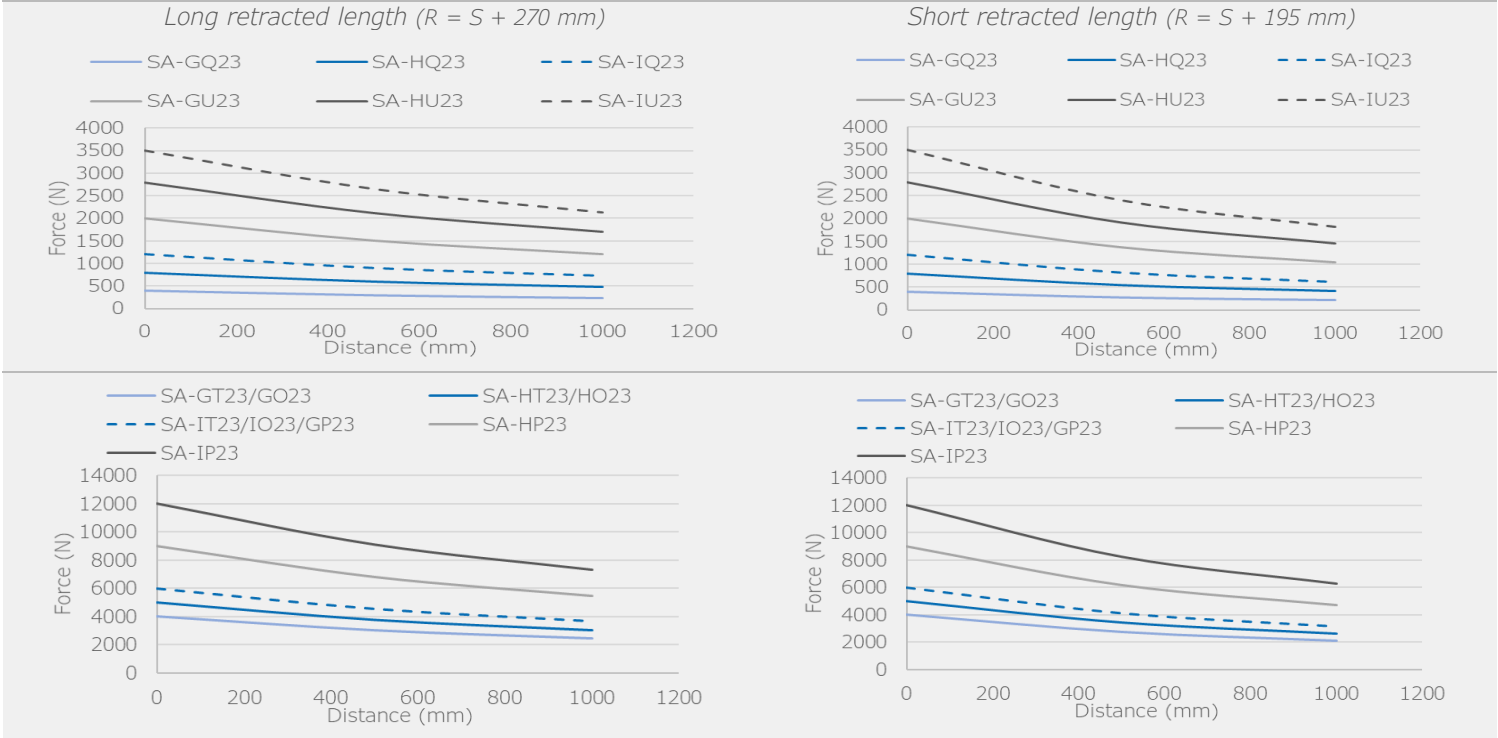


Speed

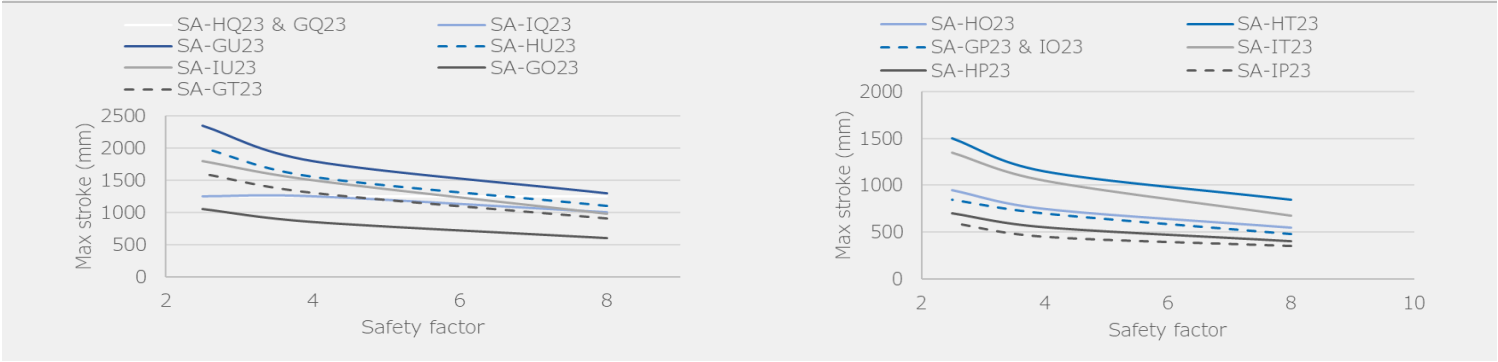


Diagrams – SA23 2 sections

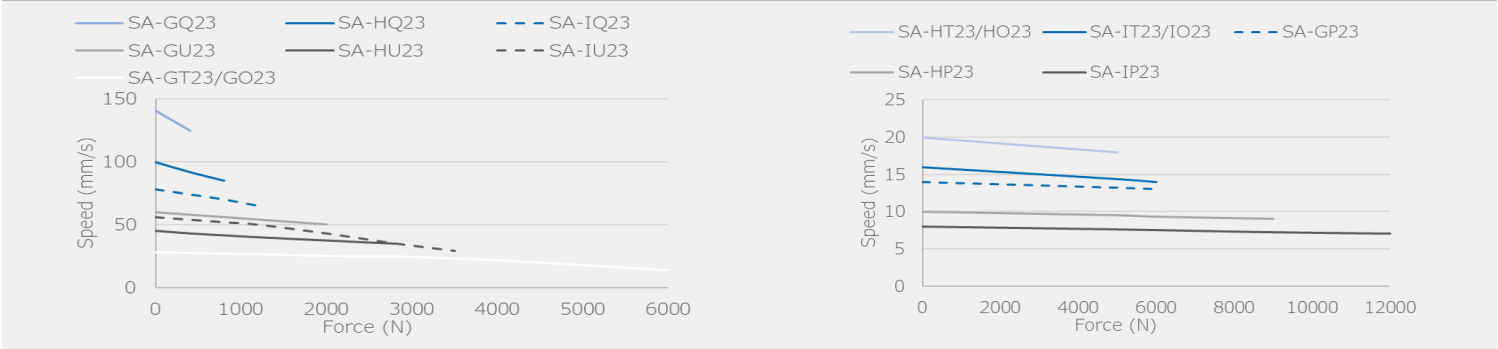
Offset load



Safety factor diagrams



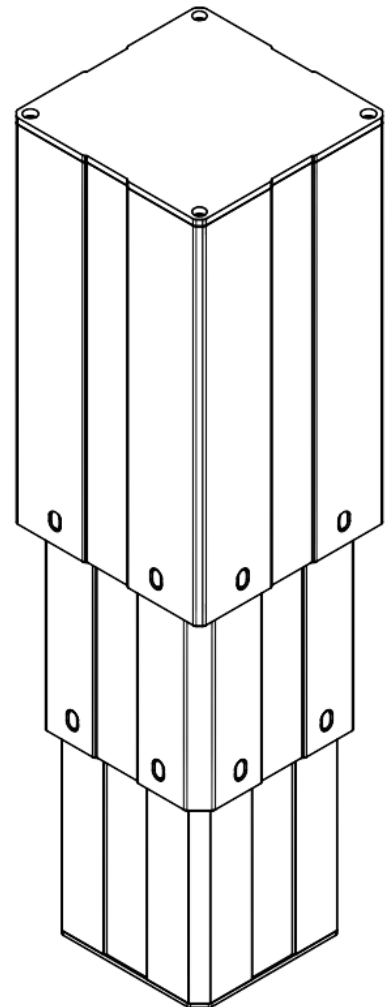
Speed diagrams



X2 Technology – The Customizer

Before use of products, see general terms & conditions and operating manuals. Lifetime and suitability are depending on application and must therefore be tested by each user. Specifications subject to change without prior notice. All components in this datasheet are property of X2 Technology and may therefore not be used without permission.

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