



X2 TECHNOLOGY

A Phoenix Mecano Brand

Lifting column

X-series

X13

X23

Max 12.000 N



Made in Sweden

Description

The X13 and X23 columns are the most robust columns on the markets that can carry extreme offset loads. Our patented drives enable very heavy loads, high speeds, and long strokes. X13 and X23 performs exceptionally well with demanding applications in many fields. With their extremely stiff aluminium tubes and long-life pads, they offer a stable and reliable guiding system that is maintenance free.



Long lifetime



Extreme offset capacity



Extremely robust

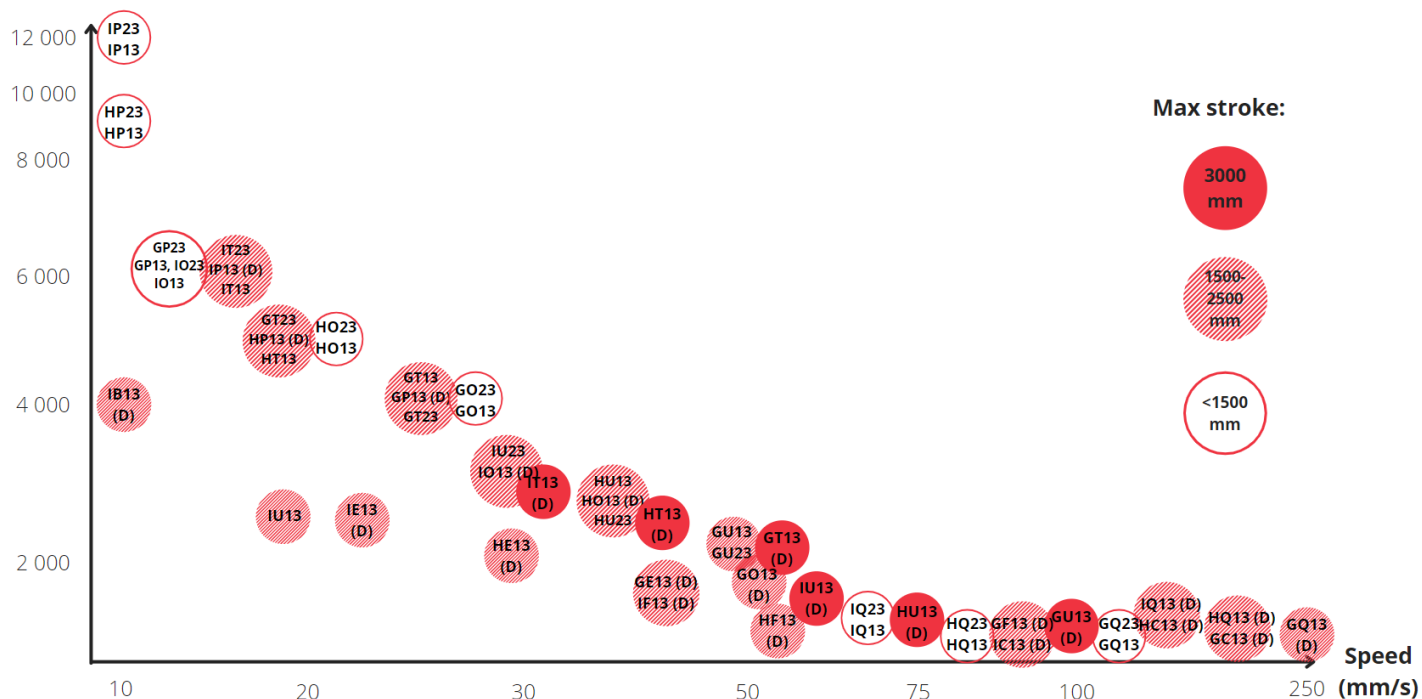
Features

Push
Encoder
Cable out small/large tube
Limit switch

Options

Pull
Customized bottom/top plates

Force (N)



- The columns are divided in two categories (3-sectioned X13 and 2-sectioned X23) with two subcategories, S and D.
- (D) on the diagram means DX13, the others are SX13 or SX23.

SX13 3 sections

	SX-GQ13	SX-HQ13	SX-IQ13	SX-GU13	SX-HU13	SX-IU13	SX-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

	SX-GT13	SX-HO13	SX-HT13	SX-GP13	SX-IO13	SX-IT13	SX-HP13	SX-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	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	900 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	1,8	2	1,8	1,8

DX13 3 sections

	DX-GQ13	DX-GC13	DX-HC13	DX-HQ13	DX-IC13	DX-IQ13	DX-GF13
Force, max push*	200 N	300 N	400 N		600 N		750 N
Self-locking force**	1.000 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+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

	DX-GU13	DX-HF13	DX-HU13	DX-IF13	DX-GE13	DX-IU13
Force, max push*	1.000 N		1.400 N		1.500 N	1.750 N
Self-locking force**	1.000 N	1.500 N	1.400 N	2.000 N	1.500 N	1.750 N
Speed @max load	100 mm/s	55 mm/s	70 mm/s	40 mm/s	40 mm/s	55 mm/s
Stroke, S (longer strokes on request)	3.000 mm	1.500 mm	3.000 mm	1.500 mm		3.000 mm
Retracted length, R***	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

	DX-GO13	DX-GT13	DX-HE13	DX-HO13	DX-HT13	DX-IE13
Force, max push*	2.000 N			2.500 N		
Self-locking force**	2.000 N			2.500 N		
Speed @max load	52 mm/s		29 mm/s	36 mm/s		23 mm/s
Stroke, S (longer strokes on request)	2.500 mm	3.000 mm	1.500 mm	2.500 mm	3.000 mm	1.500 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
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	3	4	2,5	2,5	3,4

	DX-IO13		DX-IT13	DX-GP13	DX-IB13	DX-HP13	DX-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		26 mm/s	10 mm/s	18 mm/s	14 mm/s	
Stroke, S (longer strokes on request)	2.500 mm	3.000 mm	2.500 mm	1.500 mm	2.500 mm	2.500 mm	
Retracted length, R***	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*	2,2	2	1,8	4,5	1,5	1,25	

* 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

SX23 2 sections

	SX-GQ23	SX-HQ23	SX-IQ23	SX-GU23	SX-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 mm			R = S + 120 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

	SX-IU23	SX-GO23	SX-GT23	SX-HO23	SX-HT23
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	1.250 mm	1.500 mm	1.000 mm	1.500 mm
Retracted length, R***	R = S + 120 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*	3,5	1,8	3	1,8	2,5

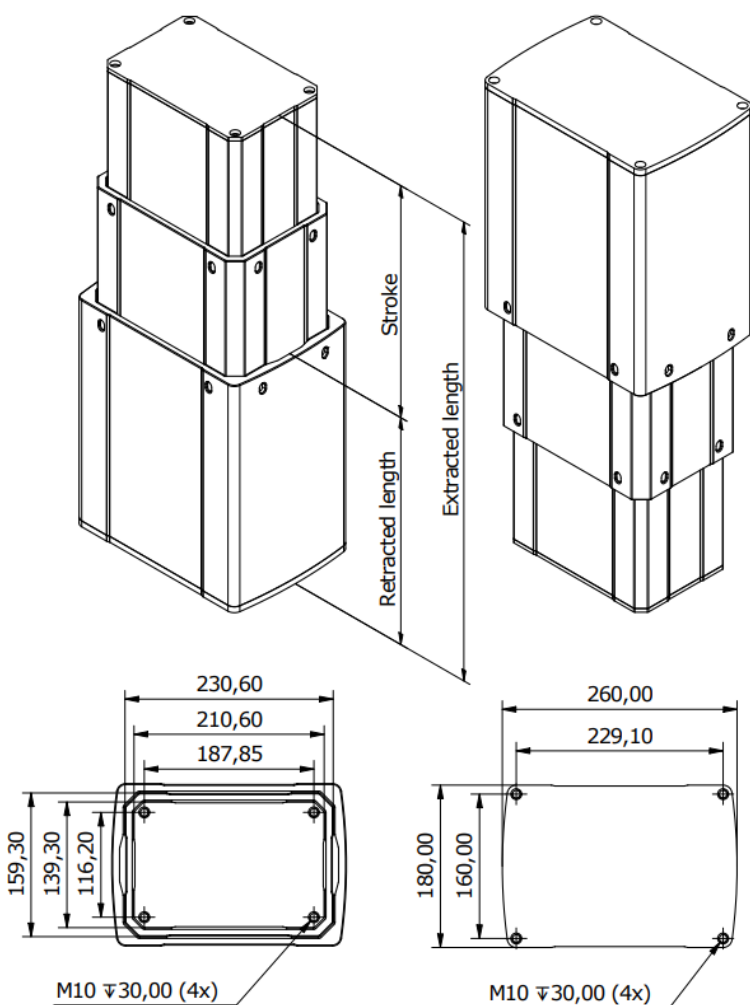
	SX-GP23	SX-IO23	SX-IT23	SX-HP23	SX-IP23
Force, max push*	6.000 N			9.000 N	12.000 N
Self-locking force**	6.000 N			9.000 N	12.000 N
Speed @max load	13 mm/s	14 mm/s		9 mm/s	7 mm/s
Stroke, S (longer strokes on request)	1.000 mm	900 mm	1.500 mm	800 mm	600 mm
Retracted length, R***	R = S + 120 mm				
Duty 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*	2	1,8	2	1,8	1,8

* See diagrams on page 8-11

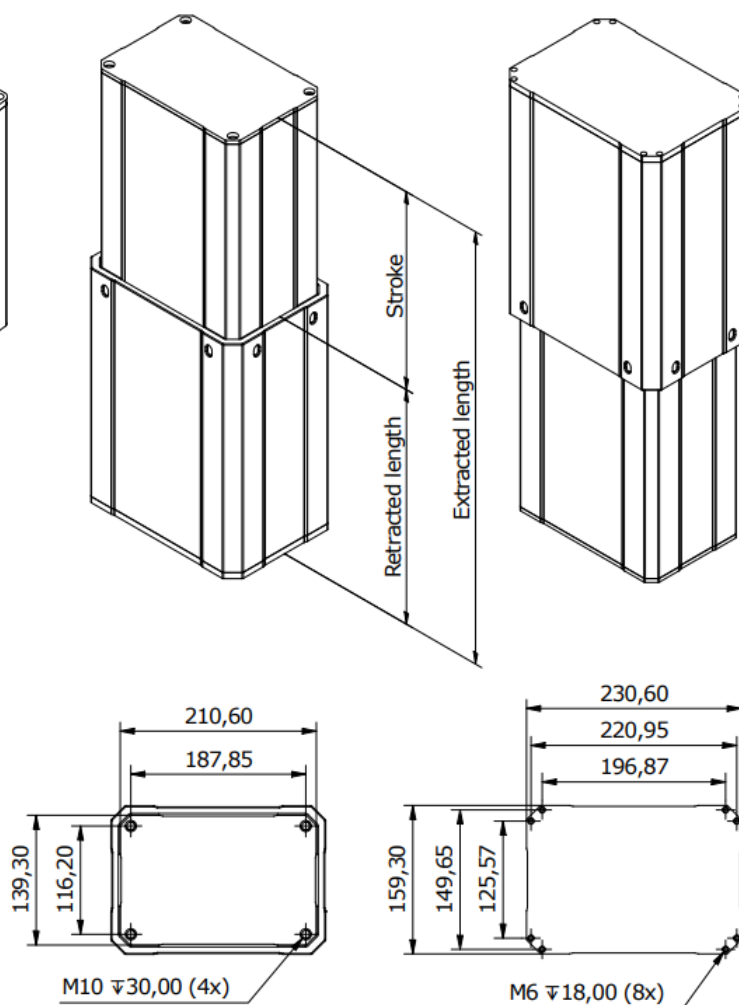
** Only applied when connected by short circuit

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

Technical drawing X13



Technical drawing X23



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-

Encoder

SX13 3 sections

Pulse/mm, dual channel A+B	SX-GQ13	SX-HQ13	SX-IQ13	SX-GU13	SX-HU13	SX-IU13	SX-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	SX-GT13	SX-HO13	SX-HT13	SX-GP13	SX-IO13	SX-IT13	SX-HP13	SX-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

DX13 3 sections

Pulse/mm, dual channel A+B	DX-GQ13	DX-GC13	DX-HC13	DX-HQ13	DX-IC13	DX-IQ13	DX-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	DX-HF13	DX-GU13	DX-IF13	DX-HU13	DX-GE13	DX-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	DX-HE13	DX-GO13	DX-GT13	DX-IE13	DX-HO13	DX-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	DX-IO13	DX-IT13	DX-IB13	DX-GP13	DX-HP13	DX-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

SX23 2 sections

Pulse/mm, dual channel A+B	SX-GQ23	SX-HQ23	SX-IQ23	SX-GU23	SX-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

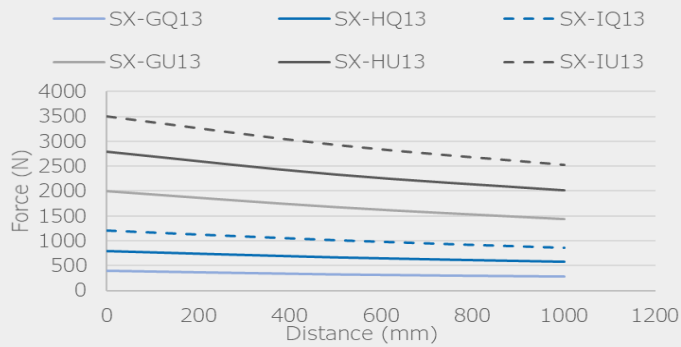
Pulse/mm, dual channel A+B	SX-IU23	SX-GT23	SX-GO23	SX-HT23	SX-HO23
G01 [p/mm]	7,6	8,5	8,5	12	12
G02 [p/mm]	15,3	17	17	24	24
G04 [p/mm]	1958,4	2176	2176	3072	3072
G05 [p/mm]	382,5	425	425	600	600

Pulse/mm, dual channel A+B	SX-IT23	SX-IO23	SX-GP23	SX-HP23	SX-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

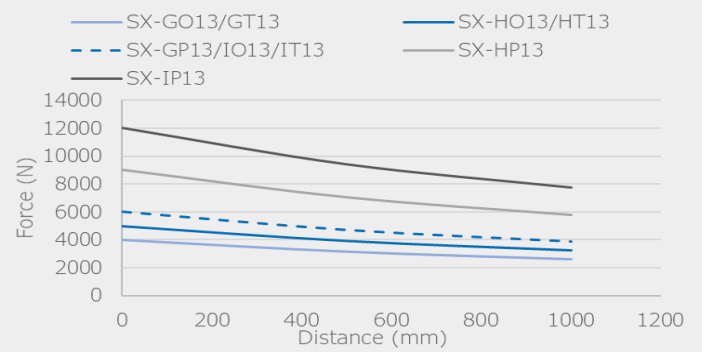
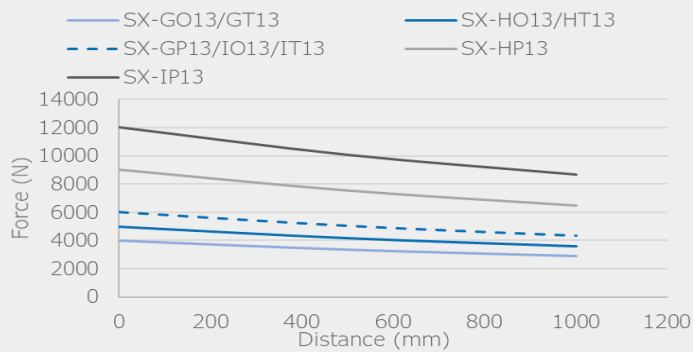
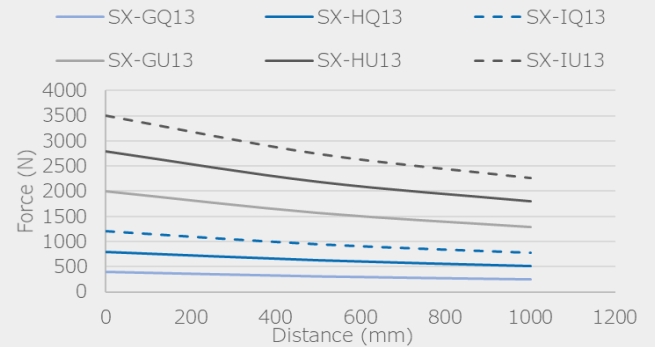
Diagrams – SX13 3 sections

Offset load

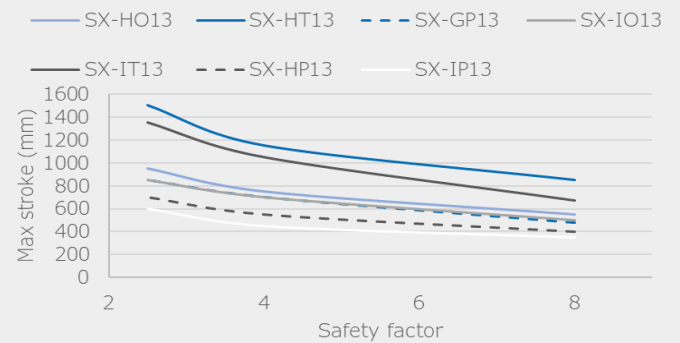
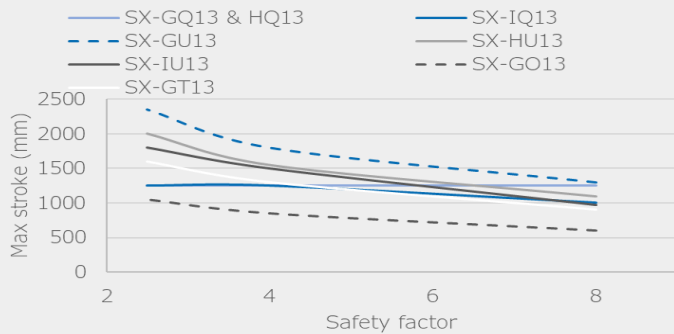
Long retracted length ($R = S + 270 \text{ mm}$)



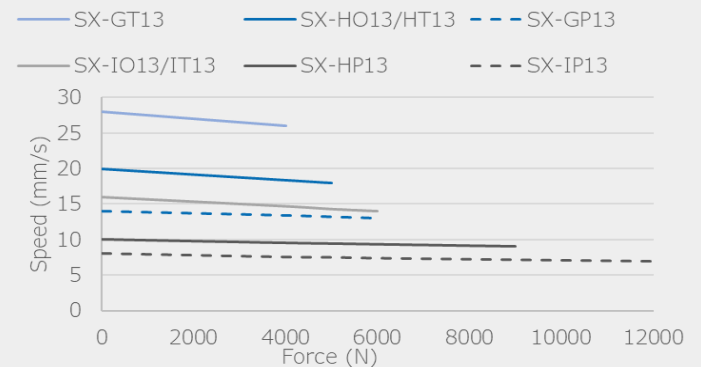
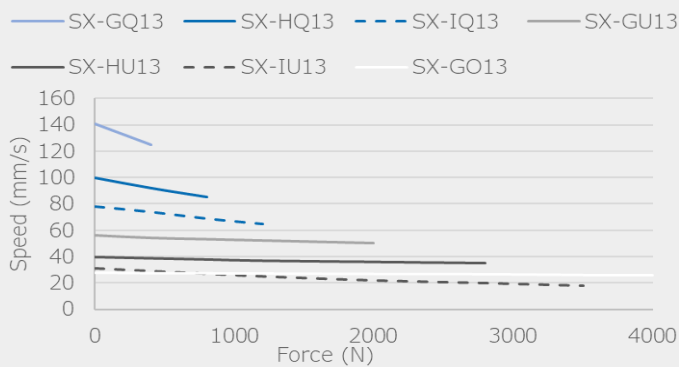
Short retracted length ($R = S + 195$)



Safety factor



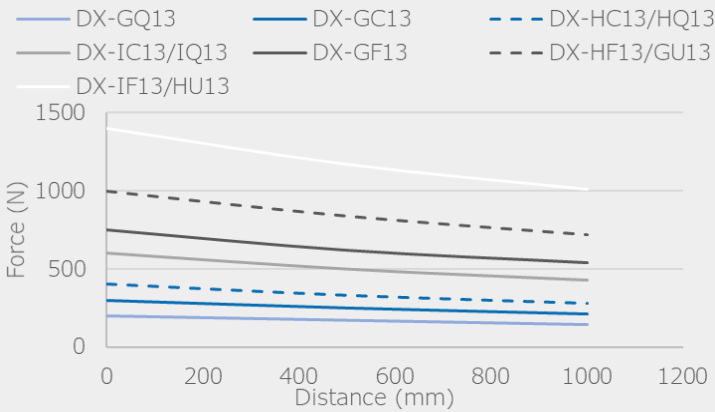
Speed



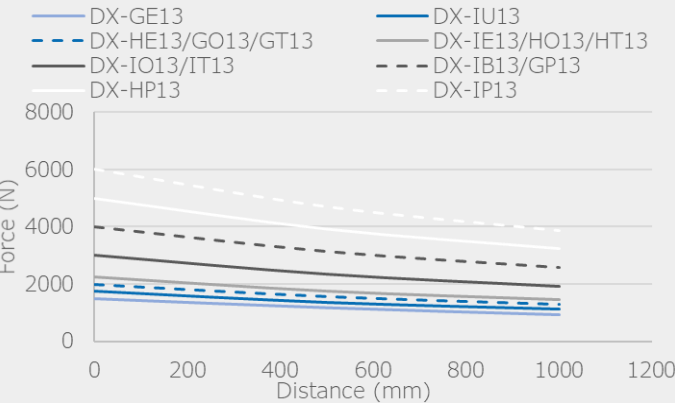
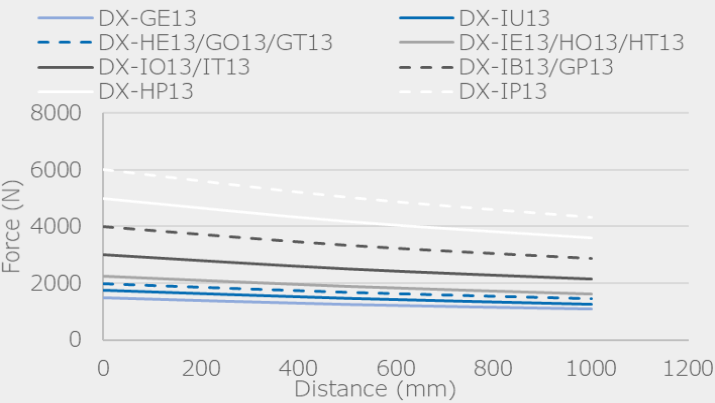
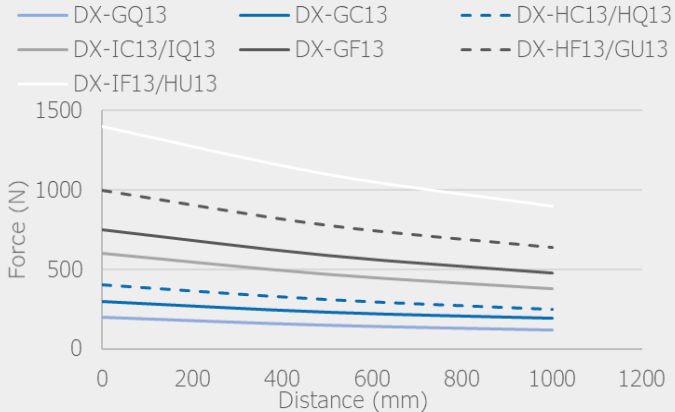
Diagrams – DX13 3 sections

Offset load

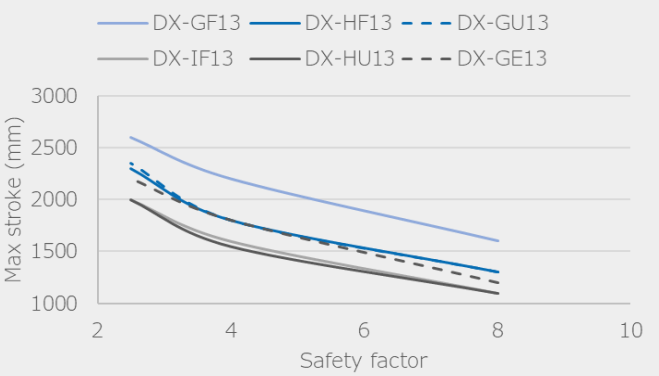
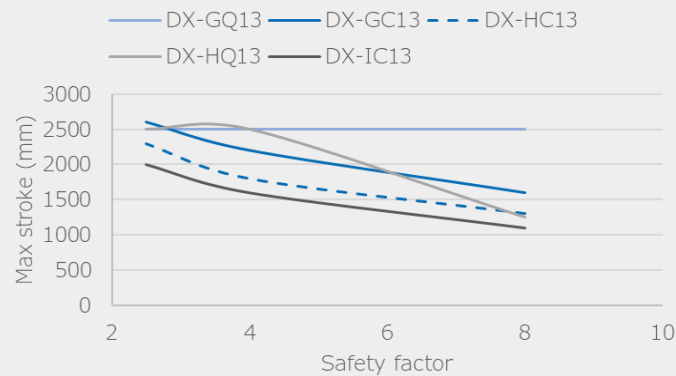
Long retracted length ($R = S/2 + 270 \text{ mm}$)



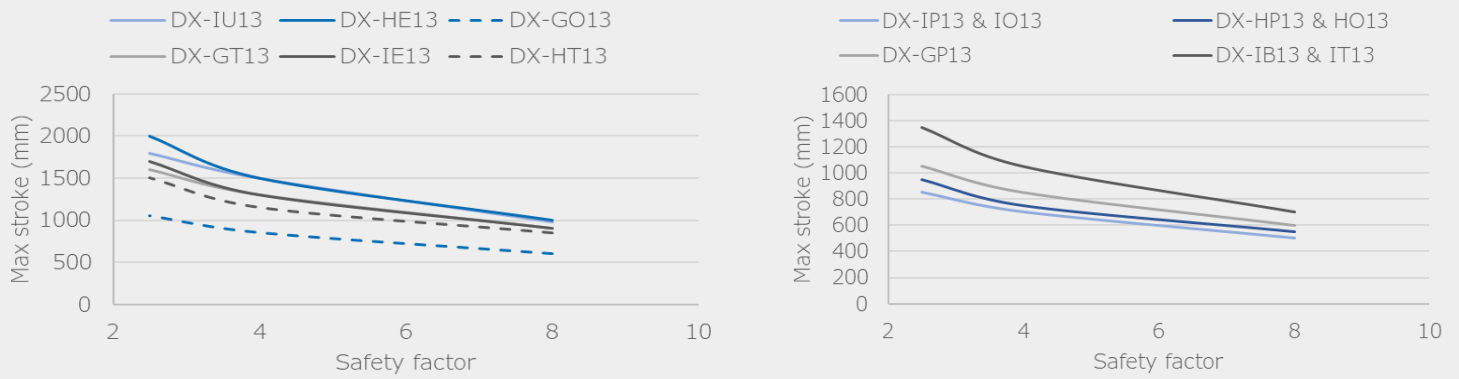
Short retracted length ($R = S/2 + 195$)



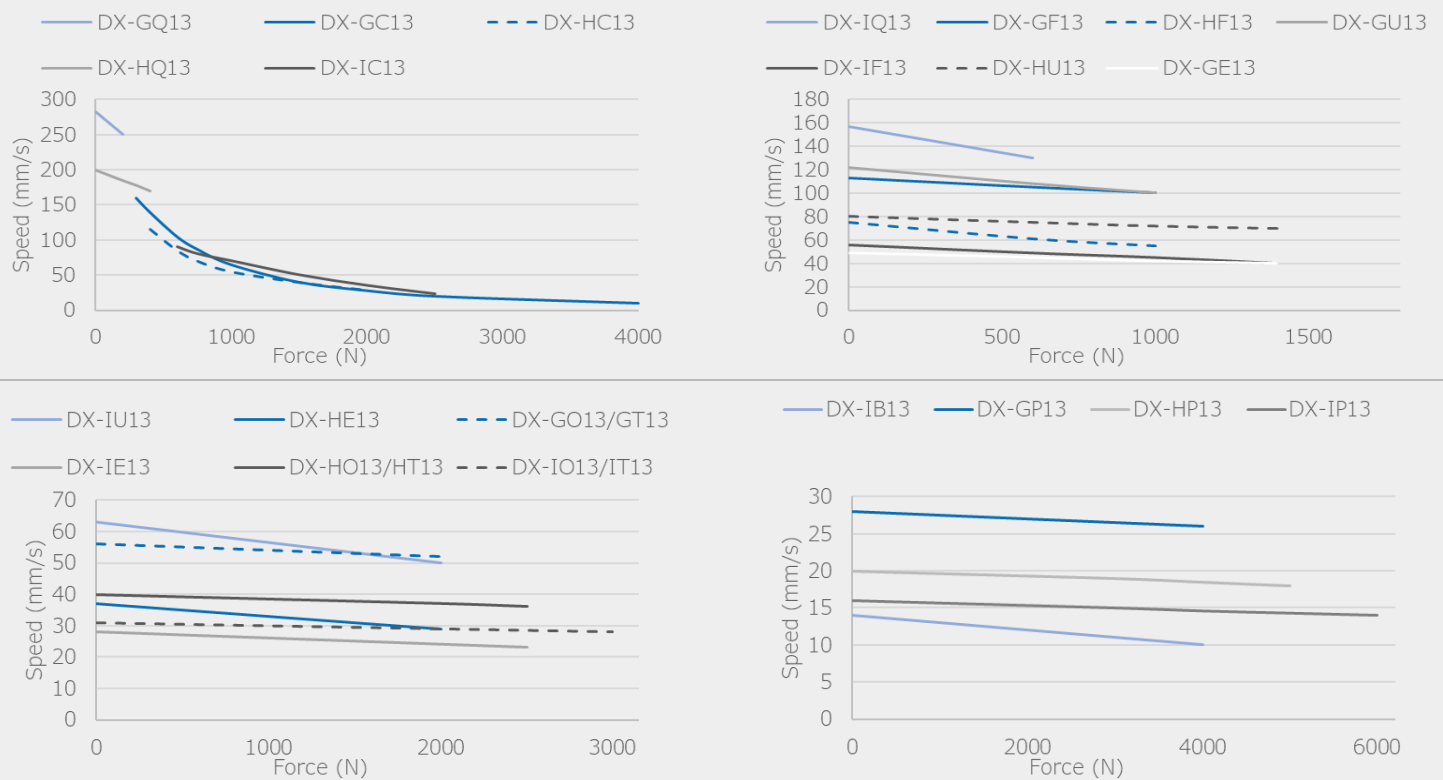
Safety factor



Safety factor

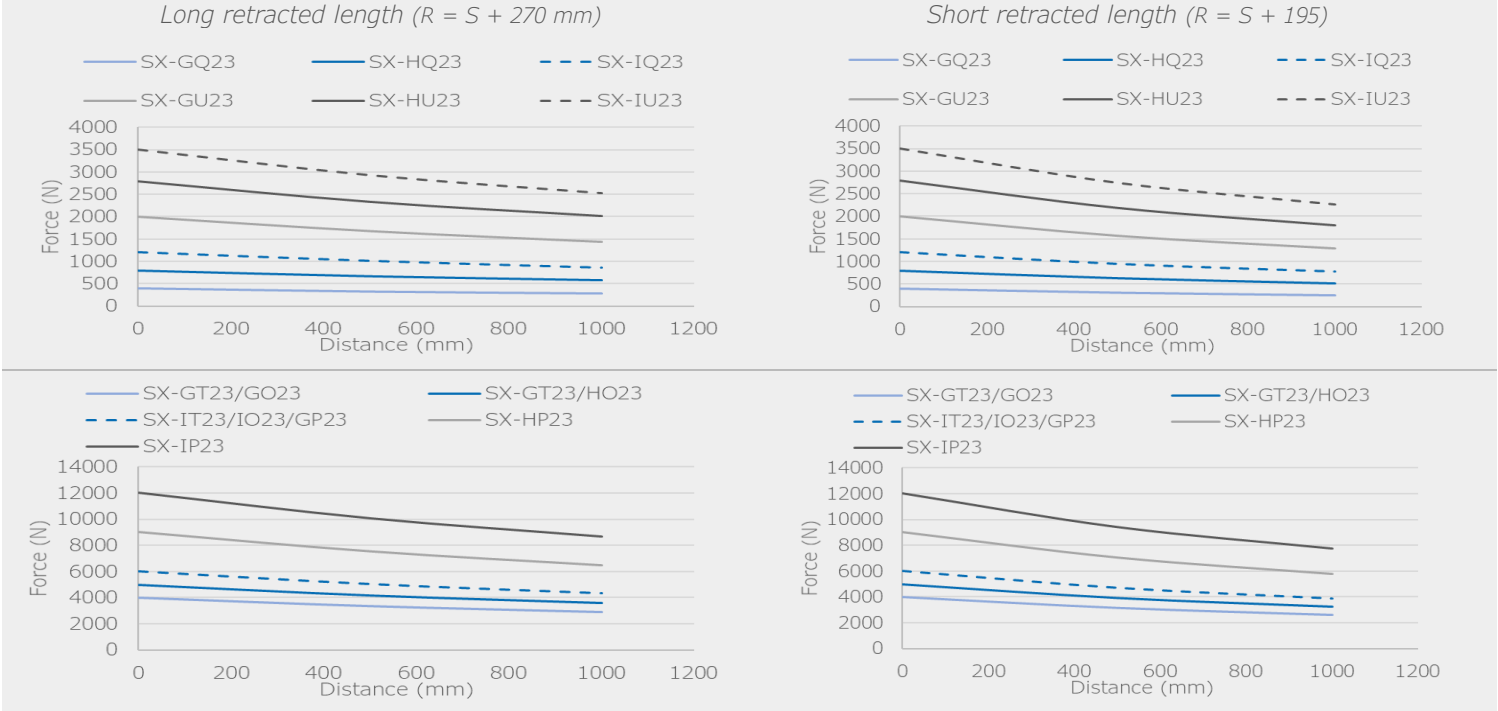


Speed

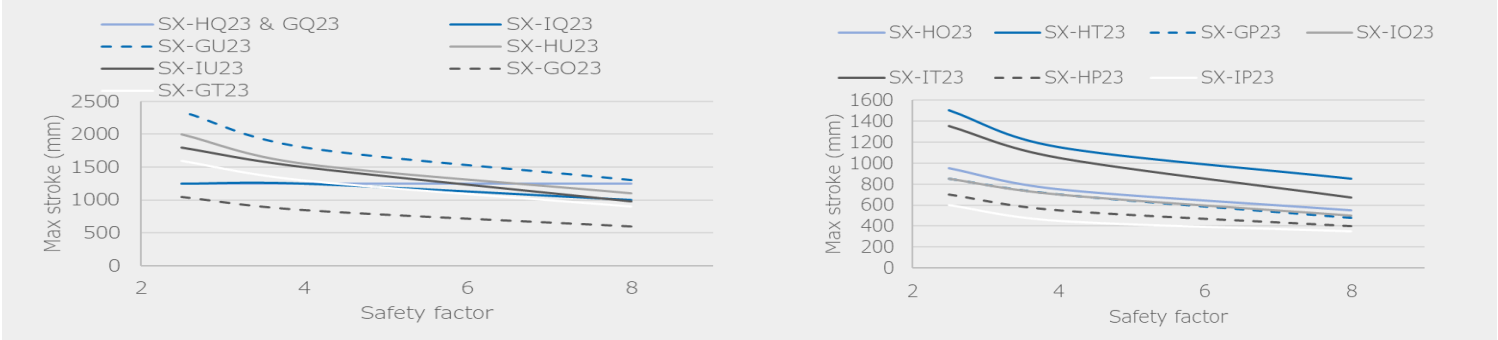


Diagrams – SX23 2 sections

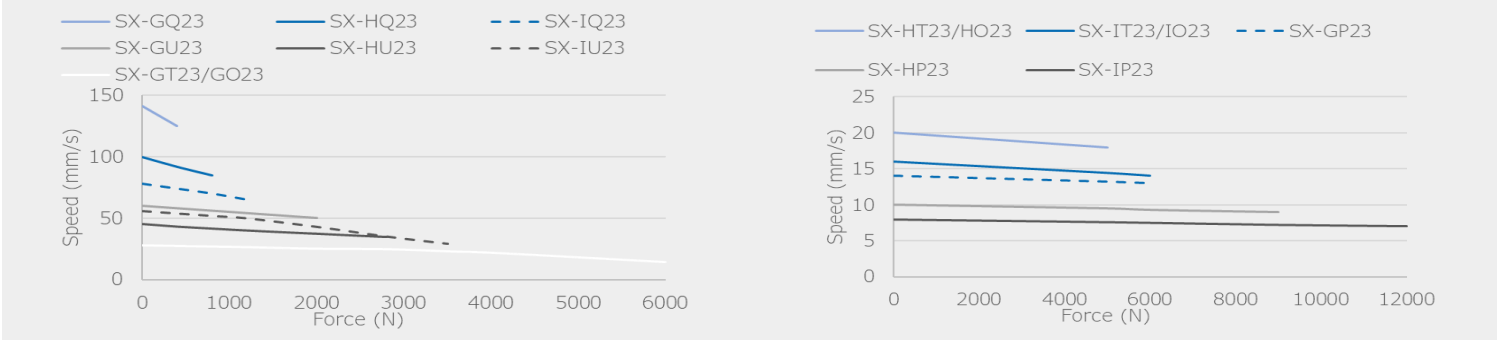
Offset load



Safety factor



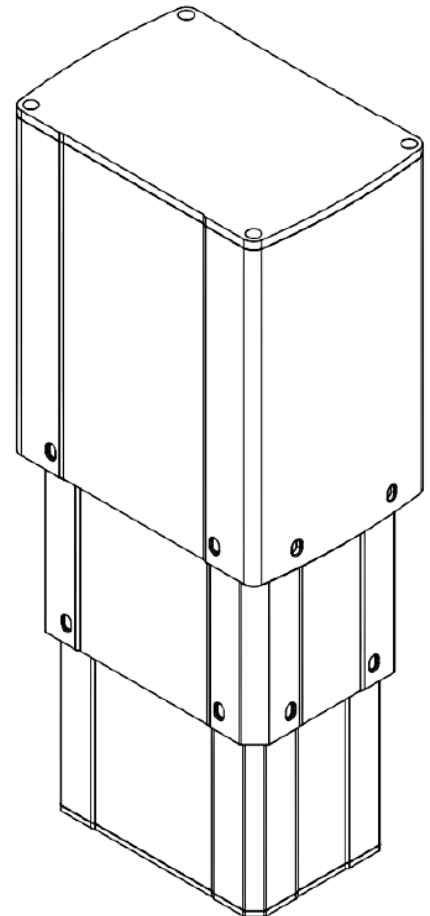
Speed



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.

Copyright © X2 Technology 2021.08.



Phoenix Mecano AB



+46 470 717950



info@x2technology.se



www.x2technology.se



Made in Sweden



X2 TECHNOLOGY

A Phoenix Mecano Brand