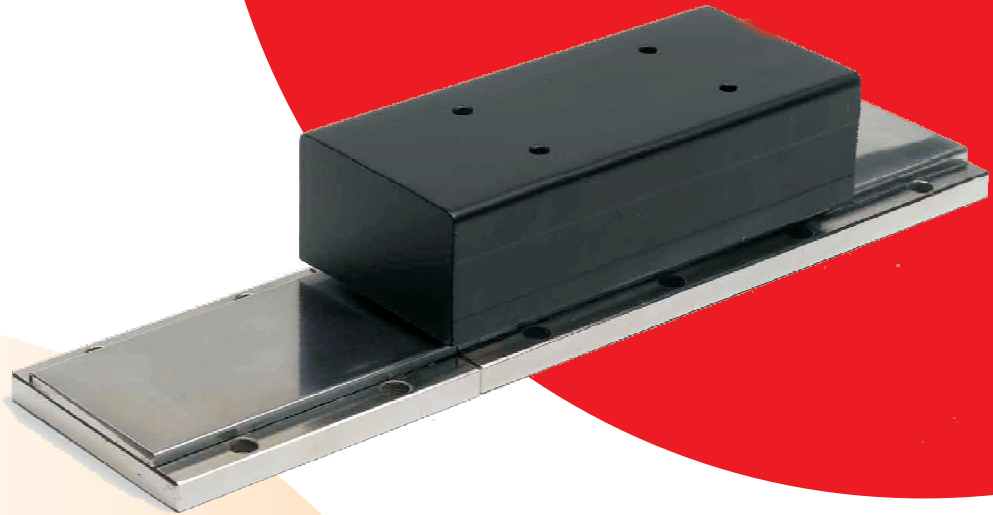


***Direct Drive
Technology***

SKA DDL

IRON CORE LINEAR MOTORS



SKA DDL LINEAR MOTOR

Precision, dynamics, performance for the cutting-edge technology in motion control: this is the core prerogative of the direct drive series by Motor Power Company. Our linear and torque motors, available in different modular solutions, respond to the most challenging applications and to your machine integration needs.

The SKA direct drive linear motors are synchronous linear permanent magnet motors created with "iron core" technology. The version proposed by Motor Power Company: the **Frameless** version -includes the moving coil, with embedded temperature sensor and magnetic track-.

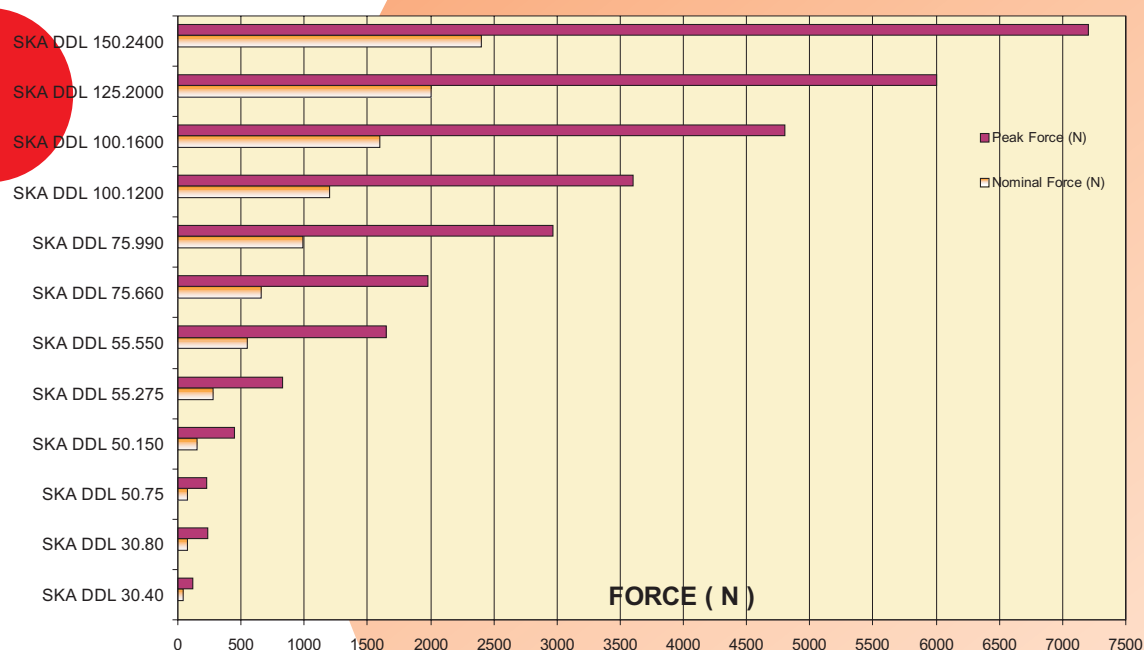
- 40N to 2400N continuous force (134.8N to 7200N peak force)
- 5 m/s speed
- 5g (50m/s²) acceleration
- Feedback options: optical or magnetic Sin Cos, TTL and absolute encoder, Hall Sensor.

All SKA motors feature advantages of Direct Drive technology:

replacing all transmission mechanical components (like gearboxes, screws, belts, pulleys, racks) bypass the limits given by backlash, friction and inertia enhance manufactured throughput and reliability improve motion linearity and precision decrease noise levels distribute power and motion control intelligence in the machine simplify and accelerate the design and assembly of the machine save energy in machine operation reduce costs.

		SKA DDL 30.40	30.80	50.75	50.150	55.275	55.550	75.660	75.990	100.1200	100.1600	125.2000	150.2400
Peak force	(N)	134.8	269.5	247	495	825	1650	1980	2970	3600	4800	6000	7200
Continuous force	(N)	40	80	75	150	275	550	660	990	1200	1600	2000	2400
Magnetic attraction	(N)	260	520	430	860	1202	2405	3143	4663	5831	7774	9829	11790
Speed	(m/s)	5	5	5	5	5	5	5	5	5	5	3	3
Acceleration	(m/s ²)	50	50	50	50	50	50	50	50	50	50	50	50
Coil lenght	(mm)	102	186	102	186	186	354	354	522	522	690	690	690
Coil width	(mm)	56	56	76	76	80	80	100	100	125	125	150	175
Coil height	(mm)	23	23	23	23	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
Coil weight	(Kg)	0.55	1	0.8	1.6	3	7	10	14	18	25	31	38
Magnet track width	(mm)	50	50	70	70	90	90	120	120	140	140	175	200
Magnet track height	(mm)	10.8	10.8	10.8	10.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8
Magnet track weight	(Kg/m)	3.3	3.3	5	5	9.1	9.1	12.2	12.2	14.6	14.6	18	21.4

Data are rated at $\Delta T = 80^{\circ}C$, 0-40°C environmental temperature - Class F insulation. Performances are rated with natural ventilation

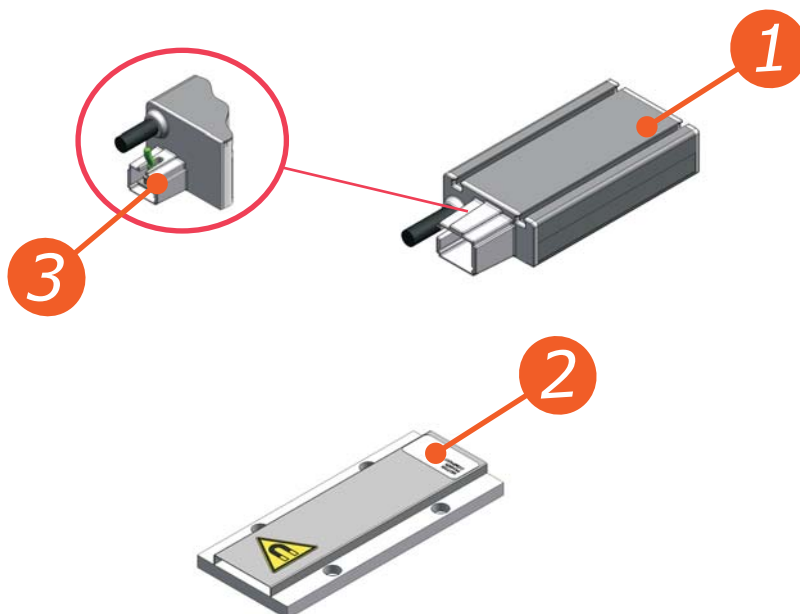


How to order SKA DDL *FRAMELESS VERSION*

SKA DDL	MC	XX	30.80	15	XXX	01	03	XXX
Series name	Motor version	Internal code	Type.Force	Winding	Internal code	Hall Sensors	Connections	Internal code
	MC= Moving Coil	Internal use only	— 30.40 — 30.80 — 50.75 — 50.150 — 55.275 — 55.550 — 75.660 — 75.990 — 100.1200 — 100.1600 — 125.2000 — 150.2400	Consult data sheet	Internal use only	00 Without Hall Sensor 01 With Hall Sensor, 500 mm cable included	03 500 mm free cable	Internal use only

SKA DDL	MT	XX	30	480	XX
Series name	Motor version	Internal code	Type	Length	Internal code
	MT= Magnet Track	Internal use only	— 30 — 50 — 55 — 75 — 100 — 125 — 150	120 240 480	Internal use only

- ① Moving coil
- ② Magnet track
- ③ Embedded Hall Sensor Slot



SERIES

SKA DDL

TRANSDUCER
SERIES PAGE 1

TRANSDUCERS

TTL OPTICAL ENCODER P200 μ m (FEEDBACK ORDER NR. 008 - 019 - 028)

RATED VOLTAGE	Vn	[Vdc]	5 $\pm$ 5%
RATED CURRENT	In	[mA]	120
MAX OUTPUT FREQUENCY	F	[MHz]	5
WORKING TEMPERATURE	Tn	[°C]	0° ÷ + 50°
ELECTRONIC TYPE			LINE DRIVER AM 26 LS32
ZERO PULSE			STANDARD
RESOLUTION	R	[μ m]	1 - 5 - 10
ACCURACY	A	[μ m]	$\pm$ 30 μ m/m
OPTICAL LINE PITCH	P	[μ m]	200
MAX SPEED	S	[m/s]	It depends of resolution

SIN COS OPTICAL ENCODER P200 μ m (FEEDBACK ORDER NR. 021)

RATED VOLTAGE	Vn	[Vdc]	5 $\pm$ 5%
RATED CURRENT	In	[mA]	120
MAX OUTPUT FREQUENCY	F	[kHz]	50
WORKING TEMPERATURE	Tn	[°C]	0° ÷ + 50°
SIGNAL TYPE		[Vdc]	1 Vpp
ZERO PULSE			STANDARD
RESOLUTION	R	[μ m]	Function of the interpolator
ACCURACY	A	[μ m]	$\pm$ 30 μ m/m
OPTICAL LINE PITCH	P	[μ m]	200
MAX SPEED	S	[m/s]	It depends of interpolator

TTL OPTICAL ENCODER P40 μ m (FEEDBACK ORDER NR. 026 - 027)

RATED VOLTAGE	Vn	[Vdc]	5 $\pm$ 5%
RATED CURRENT	In	[mA]	120
MAX OUTPUT FREQUENCY	F	[MHz]	5
WORKING TEMPERATURE	Tn	[°C]	0° ÷ + 50°
ELECTRONIC TYPE			LINE DRIVER AM 26 LS32
ZERO PULSE			STANDARD
RESOLUTION	R	[μ m]	1 - 2
ACCURACY	A	[μ m]	$\pm$ 5 μ m/m
OPTICAL LINE PITCH	P	[μ m]	40
MAX SPEED	S	[m/s]	It depends of resolution

SIN COS OPTICAL ENCODER P40 μ m (FEEDBACK ORDER NR. 015)

RATED VOLTAGE	Vn	[Vdc]	5 $\pm$ 5%
RATED CURRENT	In	[mA]	120
MAX OUTPUT FREQUENCY	F	[kHz]	250
WORKING TEMPERATURE	Tn	[°C]	0° ÷ + 50°
SIGNAL TYPE		[Vdc]	1 Vpp
ZERO PULSE			STANDARD
RESOLUTION	R	[μ m]	Function of the interpolator
ACCURACY	A	[μ m]	$\pm$ 5 μ m/m
OPTICAL LINE PITCH	P	[μ m]	40
MAX SPEED	S	[m/s]	It depends of interpolator

TTL MAGNETIC ENCODER P2mm (FEEDBACK ORDER NR. 006 – 007 - 024)

RATED VOLTAGE	Vn	[Vdc]	5 ± 2.5%
RATED CURRENT	In	[mA]	200
MAX OUTPUT FREQUENCY	F	[kHz]	500
WORKING TEMPERATURE	Tn	[°C]	0° ÷ + 50°
ELECTRONIC TYPE			LINE DRIVER AM 26 LS32
ZERO PULSE			STANDARD
RESOLUTION	R	[μm]	1 – 2 - 10
ACCURACY	A	[mm]	± [0.025+(0.02*L)] (L : stroke length in mt)
MAGNETIC TAPE PITCH	P	[mm]	2
MAX SPEED	S	[m/s]	It depends of resolution

TTL MAGNETIC ENCODER P1mm (FEEDBACK ORDER NR. 031 – 032 -033 - 034)

RATED VOLTAGE	Vn	[Vdc]	5 ± 5%
RATED CURRENT	In	[mA]	25
MAX OUTPUT FREQUENCY	F	[kHz]	500
WORKING TEMPERATURE	Tn	[°C]	-10° ÷ + 70°
ELECTRONIC TYPE			LINE DRIVER AM 26 LS32
ZERO PULSE			STANDARD
RESOLUTION	R	[μm]	0.2 – 1 – 2 - 5
ACCURACY	A	[μm]	± 10 μm/m
MAGNETIC TAPE PITCH	P	[mm]	1
MAX SPEED	S	[m/s]	It depends of resolution

SIN COS MAGNETIC ENCODER P1mm (FEEDBACK ORDER NR. 030)

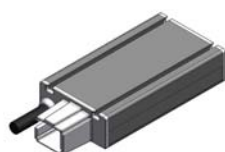
RATED VOLTAGE	Vn	[Vdc]	5 ± 5%
RATED CURRENT	In	[mA]	50
MAX OUTPUT FREQUENCY	F	[kHz]	20
WORKING TEMPERATURE	Tn	[°C]	-10° ÷ + 70°
SIGNAL TYPE		[Vdc]	1 Vpp
ZERO PULSE			STANDARD
RESOLUTION	R	[μm]	Function of the interpolator
ACCURACY	A	[μm]	± 10 μm/m
MAGNETIC TAPE PITCH	P	[mm]	1
MAX SPEED	S	[m/s]	It depends of interpolator

HALL SENSOR

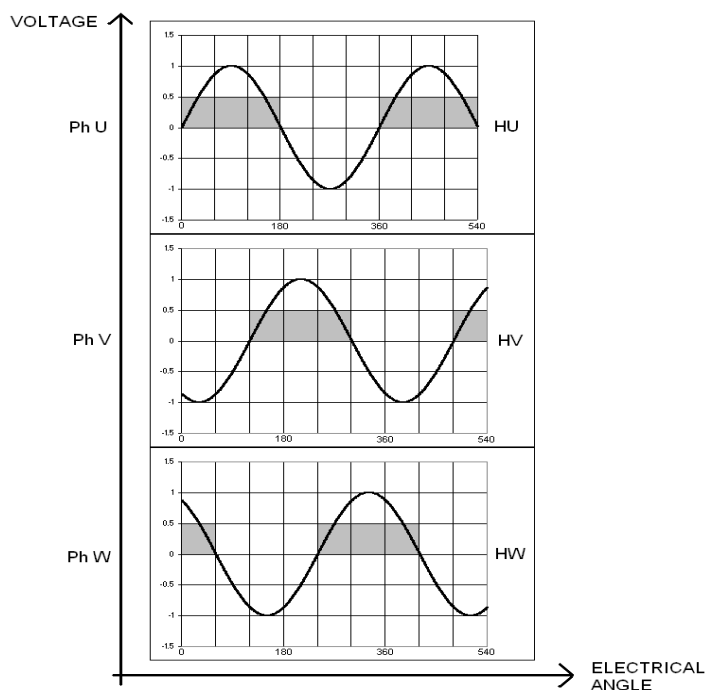
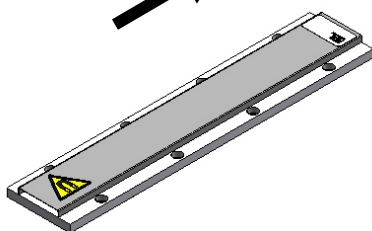
RATED VOLTAGE	Vn	[Vdc]	5
RATED CURRENT	In	[mA]	100
WORKING TEMPERATURE	Tn	[°C]	-20° ÷ +100°
N° OF COMMUTATION SIGNALS			3 Common Mode 5v

COMMUTATION SENSOR SEQUENCE

**Moving
Coil**



**Magnet
Track**



MOVING COIL WIRING			
Coil		Hall Sensor	
Power Cable	Wire Color	Signal Cable	Wire Color
U	Gray	HU	Gray
V	Black	HV	Green
W	Brown	HW	Pink
PE	Yellow/Green	0Vdc	White
Shield	Shield wire	+5Vdc	Brown

When the moving coil translates in the direction indicated by the arrow, the hall sensor output relationship with the power phases as shown in the figures above.

SERIES

FORCE [N]

SKA DDL 30.40 – 30.80

40/80

SINEWAVE FORM			SYMBOL	UNITS	TYPE OF WINDING XX = preferential winding							
					12	14	15	16				
MOTOR SPEED	Vn drive 145 V (ac) 3phase		[m/s]	4.5	3	2	1.5					
	Vn drive 230 V (ac) 3phase		[m/s]		4.5	3	2					
	Vn drive 400 V (ac) 3phase		[m/s]			5	4					
MOTOR RATINGS	COMMON RATINGS											
	Voltage constant ± 5%		Ke [Vrms/m/s]	24	36	55	72					
	Pole pitch		P [mm]		12							
	Temperature range		Tr [°C]		0 ÷ 40°							
	SKA DDL 30.40											
	Continuous force(0 m/s)		Fn0 [N]		40							
	Peak force		Fmax [N]		134.8							
	Force constant ± 5%		Kf [N/Arms]	40	60	91						
	Rated current (0 m/s)		In0 [Arms]	1	0.67	0.44						
	Peak current		I fmax [Arms]	4	2.7	1.76						
	Phase/phase res. ± 5% a 20°C		Rff [Ohm]	12	26	58						
	Phase/phase inductance		Lff [mH]	35	78	180						
	Electrical time constant		Te [msec]		3.0							
	Attraction force		Fm [N]		260							
	Power loss		Pd [W]		26							
	Thermal resistance		Rth [°C/W]		3.5							
	Motor constant		Km [N/√W]		7.84							
MOTOR RATINGS	SKA DDL 30.80											
	Continuous force(0 m/s)		Fn0 [N]		80							
	Peak force		Fmax [N]		269.6							
	Force constant ± 5%		Kf [N/Arms]	40	60	91	121					
	Rated current (0 m/s)		In0 [Arms]	2	1.33	0.88	0.66					
	Peak current		I fmax [Arms]	8	5.33	3.51	2.64					
	Phase/phase res. ± 5% a 20°C		Rff [Ohm]	6.0	13	29	52					
	Phase/phase inductance		Lff [mH]	18	39	90	156					
	Electrical time constant		Te [msec]		3.0							
	Attraction force		Fm [N]		520							
	Power loss		Pd [W]		52							
	Thermal resistance		Rth [°C/W]		1.75							
	Motor constant		Km [N/√W]		11.1							
THERMAL PROTECTION	Type of thermal cut-off			N C : normally closed								
	Rated voltage		Vn [Vac]	250								
	Rated current		In [A]	2.5								
	Operative temperature		Tn [°C]	130 °C ± 5%								
	Resetting temperature		Tr [°C]	100 °C ± 15°C								
	Operative time		[ms]	1								
	Insulation class			F								

Datasheet n°: SKADDL-2012-04-17

SERIES

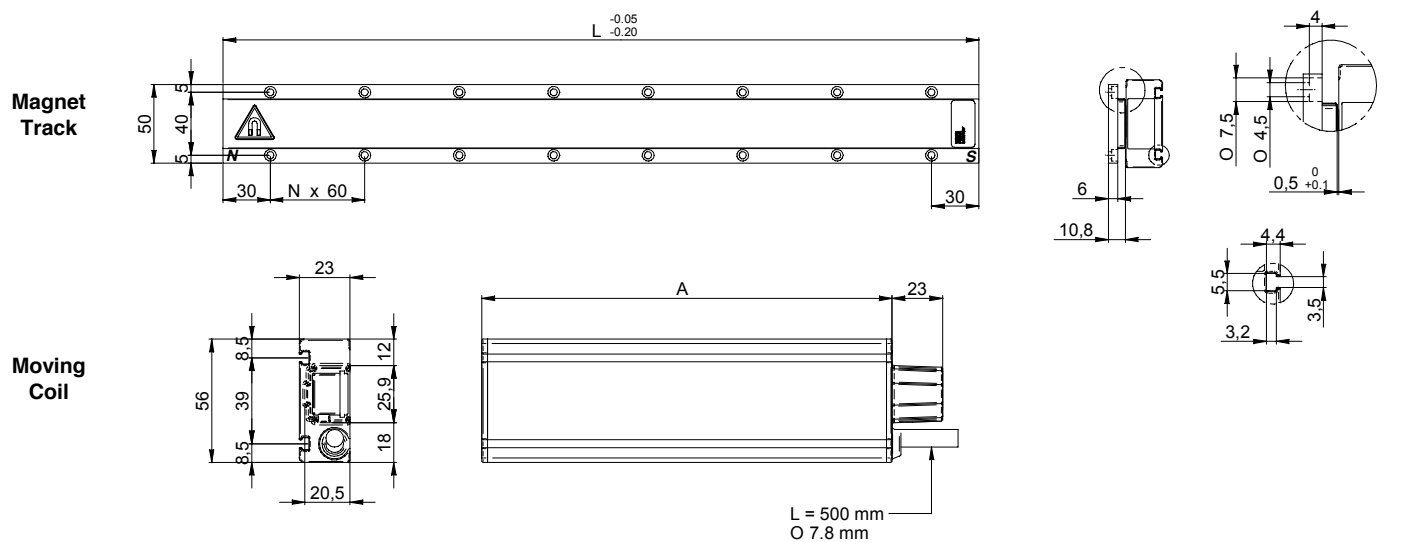
SKA

DDL 30

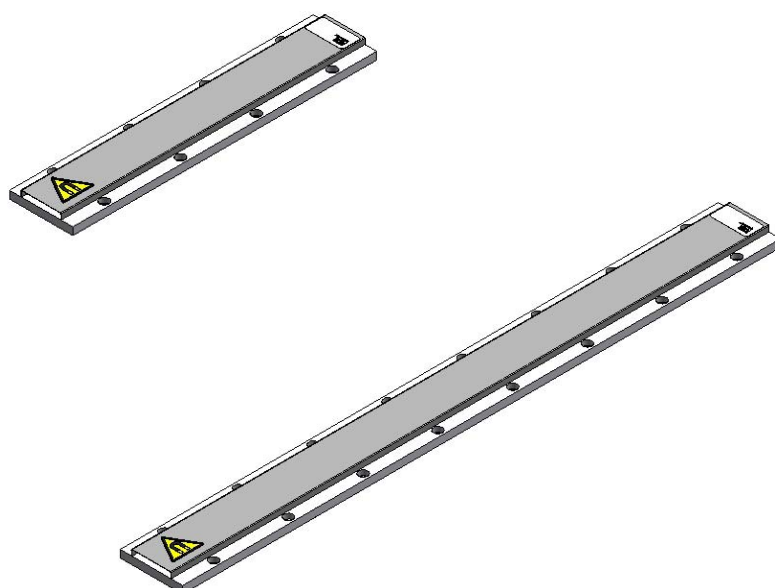
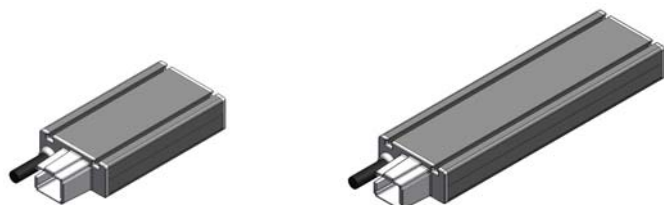
FORCE [N]

40/80

MOTOR DIMENSIONS



Magnet Track		Moving Coil	
Type	L (mm)	Type	A (mm)
30-120	120	30.40	102
30-240	240	30.80	186
30-480	480		



Datasheet n°: SKADDL-2008-03-00

SERIES

FORCE [N]

SKA DDL 50.75 – 50.150

75/150

SINEWAVE FORM			SYMBOL	UNITS	TYPE OF WINDING XX = preferential winding								
				12	15	16	17						
MOTOR SPEED	Vn drive 145 V (ac) 3phase			[m/s]	4.5	2	1.5	1.1					
	Vn drive 230 V (ac) 3phase			[m/s]		3	2	1.5					
	Vn drive 400 V (ac) 3phase			[m/s]		5	4	3					
MOTOR RATINGS	COMMON RATINGS												
	Voltage constant ± 5%			Ke	[Vrms/m/s]	24	55	72	97				
	Pole pitch			P	[mm]		12						
	Temperature range			Tr	[°C]		0 ÷ 40°						
	SKA DDL 50.75												
	Continuous force(0 m/s)			Fn0	[N]		75						
	Peak force			Fmax	[N]		247						
	Force constant ± 5%			Kf	[N/Arms]	40	91	121					
	Rated current (0 m/s)			In0	[Arms]	1.88	0.82	0.62					
	Peak current			I fmax	[Arms]	7.5	3.28	2.48					
	Phase/phase res. ± 5% a 20°C			Rff	[Ohm]	6.0	32	55					
	Phase/phase inductance			Lff	[mH]	21	111	190					
	Electrical time constant			Te	[msec]		3.5						
	Attraction force			Fm	[N]		430						
	Power loss			Pd	[W]		45						
	Thermal resistance			Rth	[°C/W]		2.0						
	Motor constant			Km	[N/√W]		11.2						
MOTOR RATINGS	SKA DDL 50. 150												
	Continuous force(0 m/s)			Fn0	[N]		150						
	Peak force			Fmax	[N]		495						
	Force constant ± 5%			Kf	[N/Arms]	40	91	161					
	Rated current (0 m/s)			In0	[Arms]	3.76	1.64	0.93					
	Peak current			I fmax	[Arms]	15	6.56	3.72					
	Phase/phase res. ± 5% a 20°C			Rff	[Ohm]	3.0	16	49					
	Phase/phase inductance			Lff	[mH]	11	55	172					
	Electrical time constant			Te	[msec]		3.5						
	Attraction force			Fm	[N]		860						
	Power loss			Pd	[W]		90						
	Thermal resistance			Rth	[°C/W]		1.0						
	Motor constant			Km	[N/√W]		15.8						
THERMAL PROTECTION	Type of thermal cut-off				N C : normally closed								
	Rated voltage			Vn	[Vac]	250							
	Rated current			In	[A]	2.5							
	Operative temperature			Tn	[°C]	130 °C ± 5%							
	Resetting temperature			Tr	[°C]	100 °C ± 15°C							
	Operative time				[ms]	1							
	Insulation class					F							

Datasheet n°: SKADDL-2012-04-17

SERIES

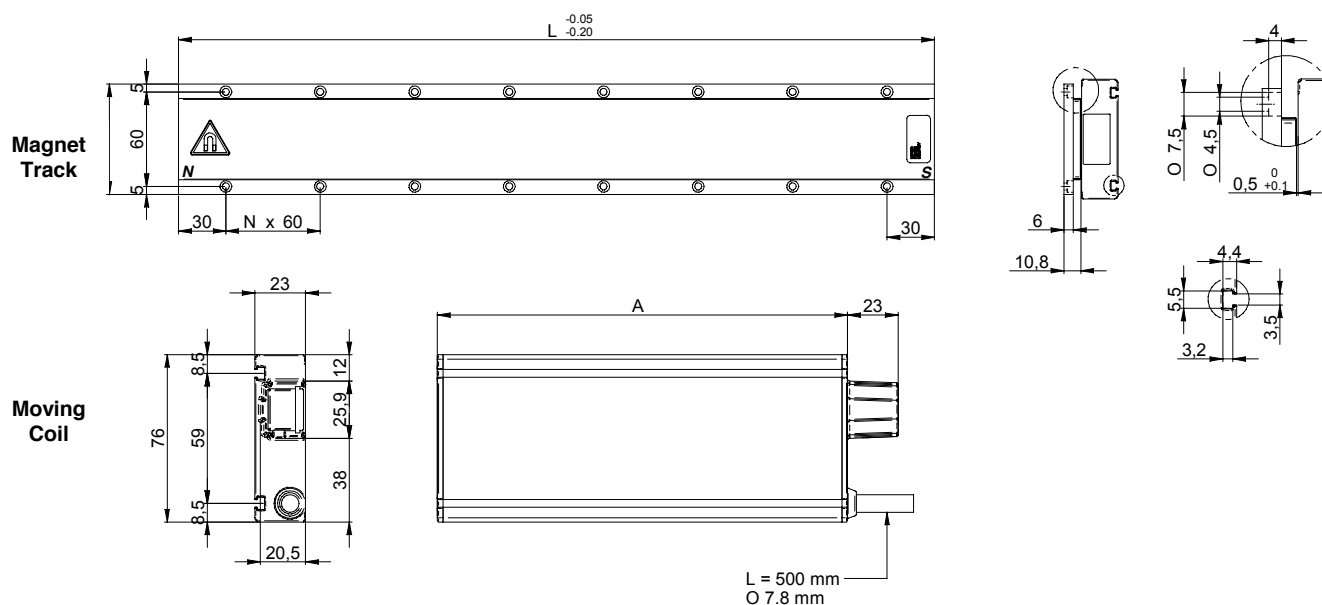
SKA

DDL 50

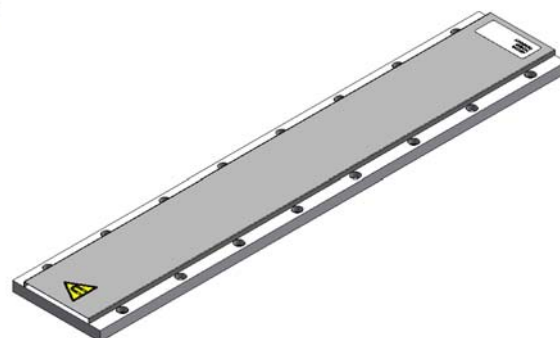
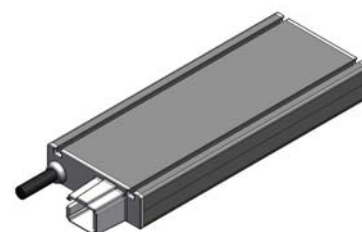
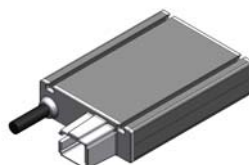
FORCE [N]

75/150

MOTOR DIMENSIONS



Magnet Track		Moving Coil	
Type	L (mm)	Type	A (mm)
50-120	120	50.75	102
50-240	240	50.150	186
50-480	480		



Datasheet n°: SKADDL-2008-03-00

SERIES

SKA DDL 55.275 – 55.550

FORCE [N]

275/550

SINEWAVE FORM			SYMBOL	UNITS	TYPE OF WINDING XX = preferential winding										
MOTOR SPEED	Vn drive 145 V (ac) 3phase			[m/s]	14	15	16	17	31						
	Vn drive 230 V (ac) 3phase			[m/s]	4.5	3	2	1.5	1						
	Vn drive 400 V (ac) 3phase			[m/s]		5	4	3	2						
	COMMON RATINGS														
Voltage constant ± 5%			Ke	[Vrms/m/s]	36	55	72	97	116						
Pole pitch			P	[mm]			24								
Temperature range			Tr	[°C]	0 ÷ 40°										
MOTOR RATINGS	SKA DDL 55.275														
	Continuous force(0 m/s)			Fn0	[N]			275							
	Peak force			Fmax	[N]			825							
	Force constant ± 5%			Kf	[N/Arms]	60	91	121	161	192					
	Rated current (0 m/s)			In0	[Arms]	4.6	3.0	2.28	1.71	1.43					
	Peak current			I fmax	[Arms]	18.38	12.0	9.13	6.84	5.7					
	Phase/phase res. ± 5% a 20°C			Rff	[Ohm]	2.3	4.9	8.8	15.0	23					
	Phase/phase inductance			Lff	[mH]	32	68	120	206	325					
	Electrical time constant			Te	[msec]			13.8							
	Attraction force			Fm	[N]			1202							
	Power loss			Pd	[W]			96							
	Thermal resistance			Rth	[°C/W]			0.94							
	Motor constant			Km	[N/√W]			28.1							
	MOTOR RATINGS	SKA DDL 55. 550													
		Continuous force(0 m/s)			Fn0	[N]			550						
Peak force			Fmax	[N]			1650								
Force constant ± 5%			Kf	[N/Arms]		86	113	151	192						
Rated current (0 m/s)			In0	[Arms]		6.41	4.87	3.65	2.86						
Peak current			I fmax	[Arms]		25.65	19.47	14.59	11.4						
Phase/phase res. ± 5% a 20°C			Rff	[Ohm]		2.5	4.4	7.5	12						
Phase/phase inductance			Lff	[mH]		34	60	103	162						
Electrical time constant			Te	[msec]			13.8								
Attraction force			Fm	[N]			2405								
Power loss			Pd	[W]			192								
Thermal resistance			Rth	[°C/W]			0.47								
Motor constant			Km	[N/√W]			39.7								
THERMAL PROTECTION		Type of thermal cut-off				N C : normally closed									
		Rated voltage			Vn	[Vac]	250								
	Rated current			In	[A]	2.5									
	Operative temperature			Tn	[°C]	130 °C ± 5%									
	Resetting temperature			Tr	[°C]	100 °C ± 15°C									
	Operative time				[ms]	1									
	Insulation class					F									

Datasheet n°: SKADDL-2012-04-17

SERIES

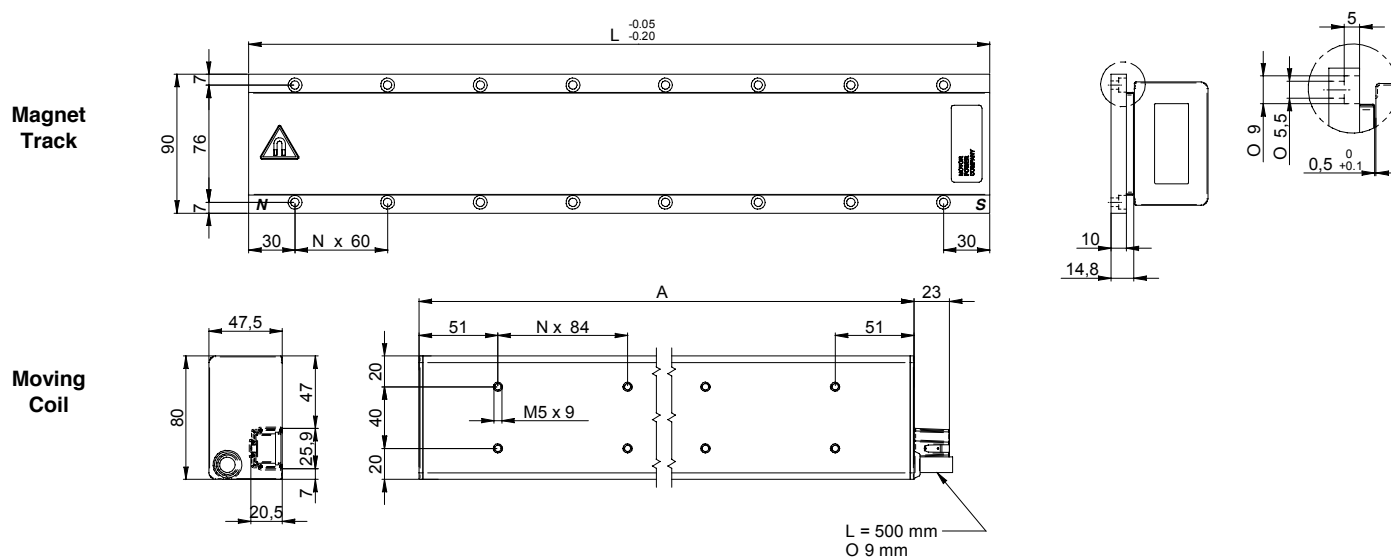
SKA

DDL 55

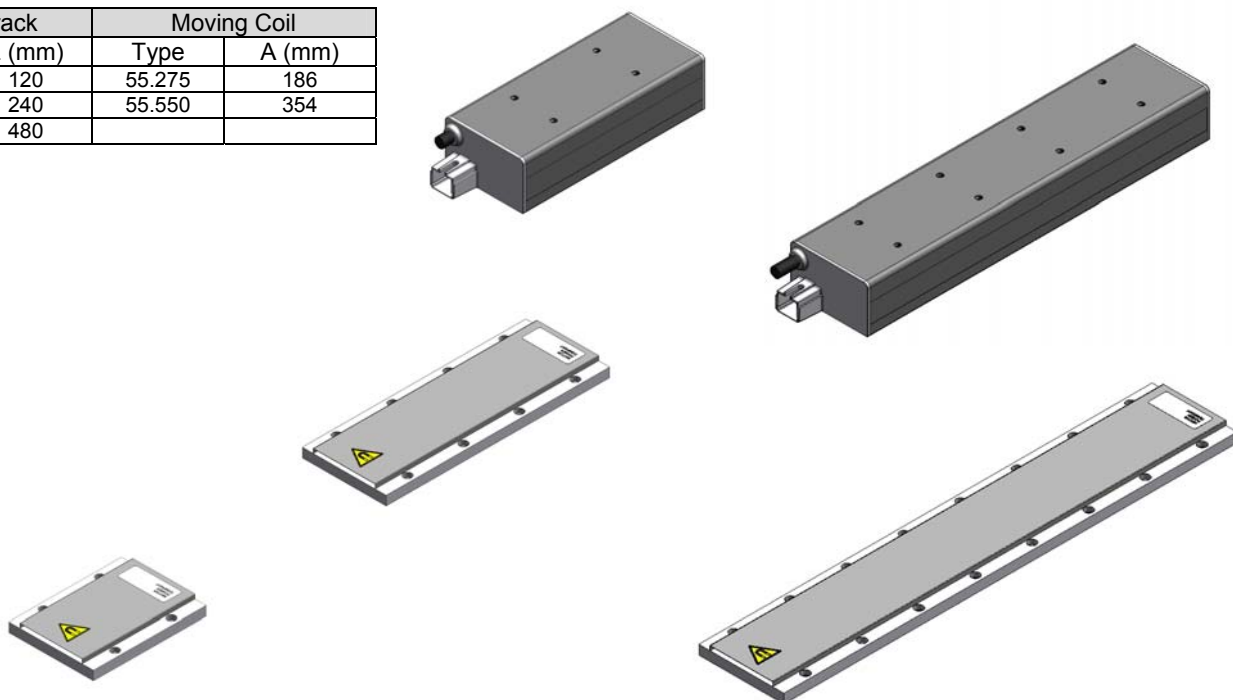
FORCE [N]

275/550

MOTOR DIMENSIONS



Magnet Track		Moving Coil	
Type	L (mm)	Type	A (mm)
55-120	120	55.275	186
55-240	240	55.550	354
55-480	480		



Datasheet n°: SKADDL-2008-03-00

SERIES

FORCE [N]

SKA DDL 75.660 – 75.990**660/990**

SINEWAVE FORM			SYMBOL	UNITS	TYPE OF WINDING XX = preferential winding											
					15					17						
MOTR SPEED	Vn drive 145 V (ac) 3phase			[m/s]	2					1.1						
	Vn drive 230 V (ac) 3phase			[m/s]	3					1.5						
	Vn drive 400 V (ac) 3phase			[m/s]	5					3						
MOTOR RATINGS	COMMON RATINGS															
	Voltage constant ± 5%			Ke	[Vrms/m/s]	55					97					
	Pole pitch			P	[mm]						24					
	Temperature range			Tr	[°C]						0 ÷ 40°					
	SKA DDL 75.660															
	Continuous force(0 m/s)			Fn0	[N]						660					
	Peak force			Fmax	[N]						1980					
	Force constant ± 5%			Kf	[N/Arms]	86					151					
	Rated current (0 m/s)			In0	[Arms]	7.7					4.38					
	Peak current			I fmax	[Arms]	30.78					17.5					
	Phase/phase res. ± 5% a 20°C			Rff	[Ohm]	2.3					7.5					
	Phase/phase inductance			Lff	[mH]	31					97					
	Electrical time constant			Te	[msec]						13					
	Attraction force			Fm	[N]						3143					
	Power loss			Pd	[W]						290					
Thermal resistance			Rth	[°C/W]						0.31						
Motor constant			Km	[N/√W]						39						
MOTOR RATINGS	SKA DDL 75.990															
	Continuous force(0 m/s)			Fn0	[N]						990					
	Peak force			Fmax	[N]						2970					
	Force constant ± 5%			Kf	[N/Arms]	86					151					
	Rated current (0 m/s)			In0	[Arms]	11.54					6.57					
	Peak current			I fmax	[Arms]	46.17					26.25					
	Phase/phase res. ± 5% a 20°C			Rff	[Ohm]	1.53					5.0					
	Phase/phase inductance			Lff	[mH]	20					64					
	Electrical time constant			Te	[msec]						13					
	Attraction force			Fm	[N]						4663					
	Power loss			Pd	[W]						435					
	Thermal resistance			Rth	[°C/W]						0.21					
	Motor constant			Km	[N/√W]						47					
	THERMAL PROTECTION	Type of thermal cut-off					N C : normally closed									
		Rated voltage			Vn	[Vac]						250				
Rated current			In	[A]						2.5						
Operative temperature			Tn	[°C]						130 °C ± 5%						
Resetting temperature			Tr	[°C]						100 °C ± 15°C						
Operative time				[ms]						1						
Insulation class										F						

Datasheet n°: SKADDL– 2012-04-18

SERIES

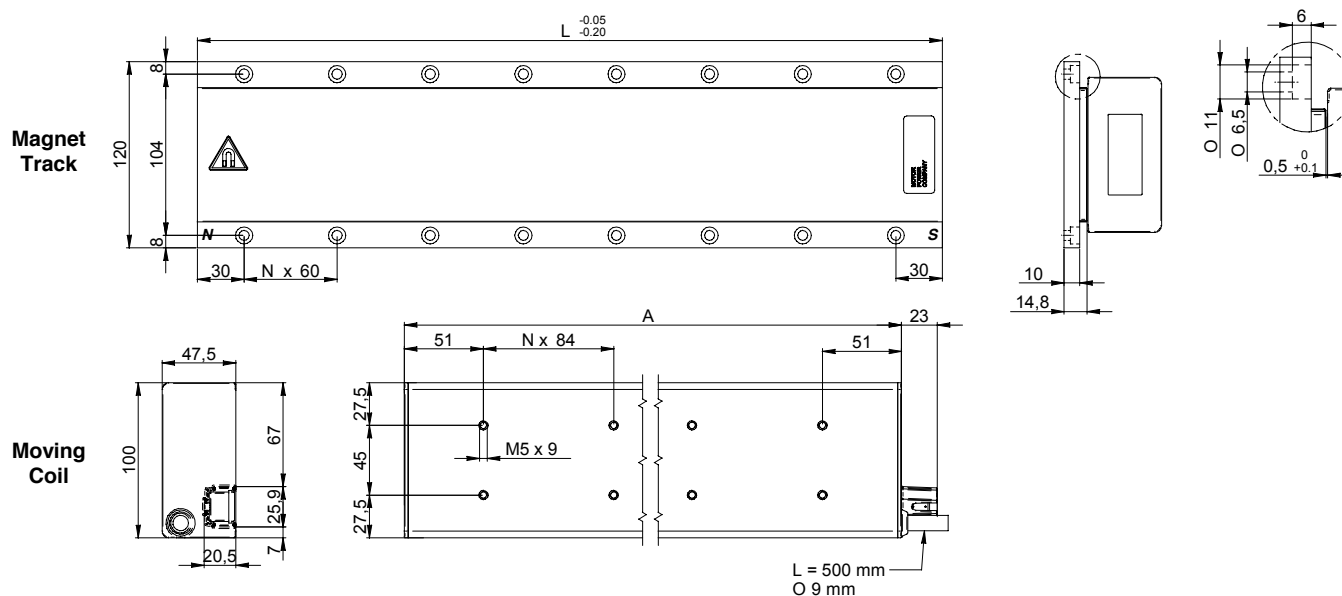
SKA

DDL 75

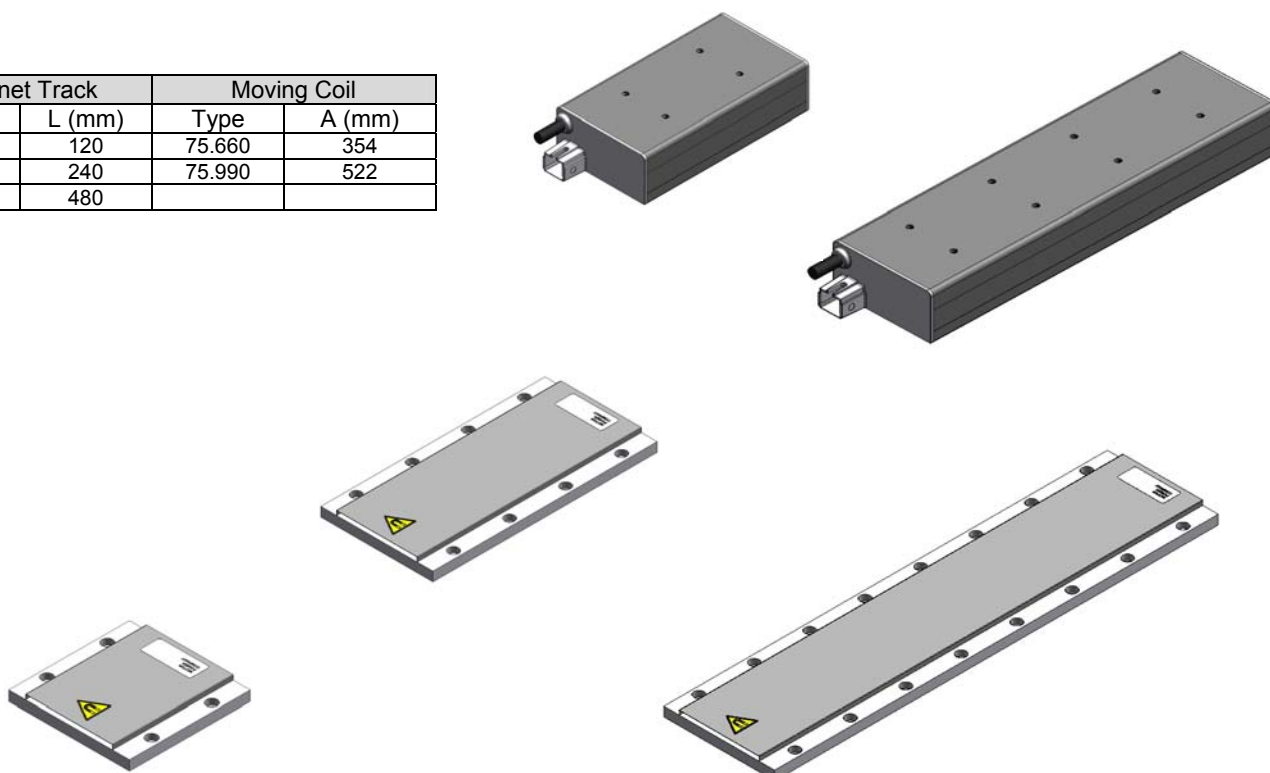
FORCE [N]

660/990

MOTOR DIMENSIONS



Magnet Track		Moving Coil	
Type	L (mm)	Type	A (mm)
75-120	120	75.660	354
75-240	240	75.990	522
75-480	480		



Datasheet n°: SKADDL-2008-03-00

SERIES

SKA DDL 100.1200 – 100.1600

FORCE [N]
1200/1600

SINEWAVE FORM			SYMBOL	UNITS	TYPE OF WINDING XX = preferential winding												
						15	16	17									
MOTOR SPEED	Vn drive 145 V (ac) 3phase		[m/s]		2		1.5		1.1								
	Vn drive 230 V (ac) 3phase		[m/s]		3		2		1.5								
	Vn drive 400 V (ac) 3phase		[m/s]		5		4		3								
MOTOR RATINGS	COMMON RATINGS																
	Voltage constant ± 5%		Ke	[Vrms/m/s]	55		72		97								
	Pole pitch		P	[mm]					24								
	Temperature range		Tr	[°C]					0 ÷ 40°								
	SKA DDL 100.1200																
	Continuous force(0 m/s)		Fn0	[N]					1200								
	Peak force		Fmax	[N]					3600								
	Force constant ± 5%		Kf	[N/Arms]	86				151								
	Rated current (0 m/s)		In0	[Arms]	14				7.96								
	Peak current		I fmax	[Arms]	56				31.8								
	Phase/phase res. ± 5% a 20°C		Rff	[Ohm]	0.80				2.5								
	Phase/phase inductance		Lff	[mH]	15				44								
	Electrical time constant		Te	[msec]					18								
	Attraction force		Fm	[N]					5831								
	Power loss		Pd	[W]					345								
	Thermal resistance		Rth	[°C/W]					0.26								
	Motor constant		Km	[N/√W]					64.6								
	MOTOR RATINGS	SKA DDL 100.1600															
		Continuous force(0 m/s)		Fn0	[N]					1600							
Peak force		Fmax	[N]					4800									
Force constant ± 5%		Kf	[N/Arms]			110		147									
Rated current (0 m/s)		In0	[Arms]			14.5		10.9									
Peak current		I fmax	[Arms]			56.5		42.3									
Phase/phase res. ± 5% a 20°C		Rff	[Ohm]			1.0		1.9									
Phase/phase inductance		Lff	[mH]			18		33									
Electrical time constant		Te	[msec]					18									
Attraction force		Fm	[N]					7774									
Power loss		Pd	[W]					460									
Thermal resistance		Rth	[°C/W]					0.19									
Motor constant		Km	[N/√W]					74.6									
THERMAL PROTECTION	Type of thermal cut-off		N C : normally closed														
	Rated voltage		Vn	[Vac]	250												
	Rated current		In	[A]	2.5												
	Operative temperature		Tn	[°C]	130 °C ± 5%												
	Resetting temperature		Tr	[°C]	100 °C ± 15°C												
	Operative time			[ms]	1												
	Insulation class				F												

Datasheet n°: SKADDL – 2012-04-18

SERIES

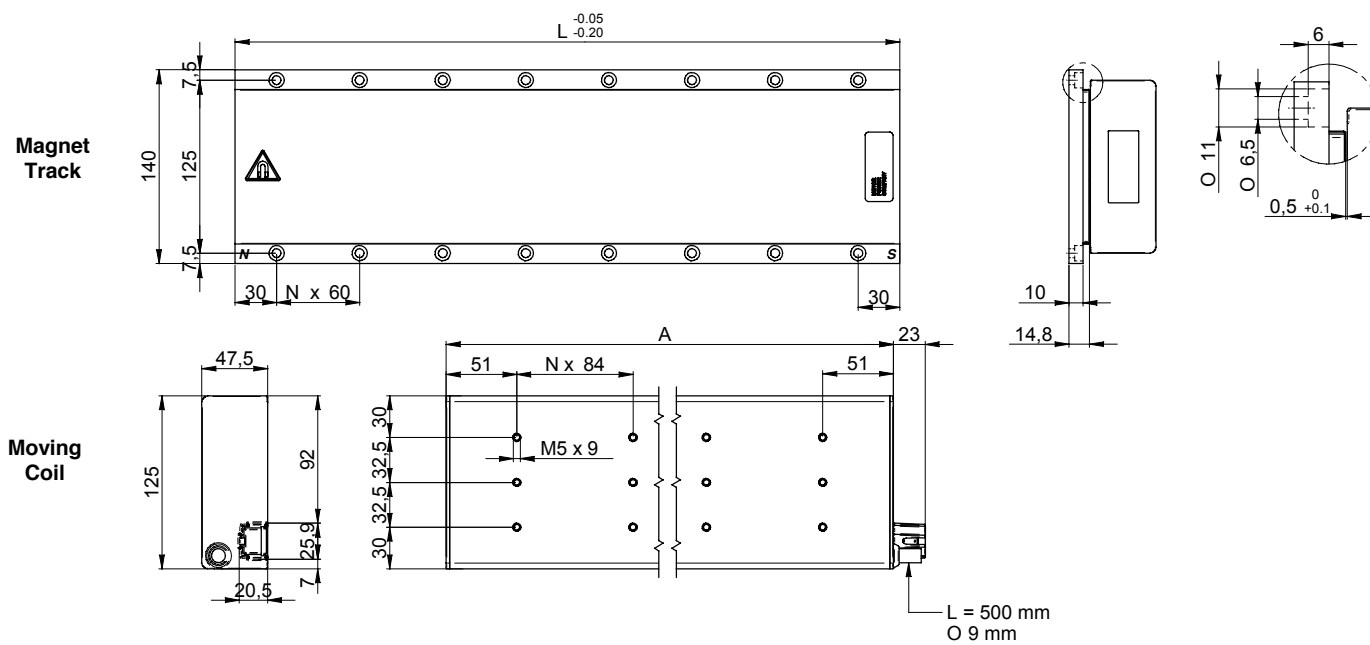
SKA

DDL 100

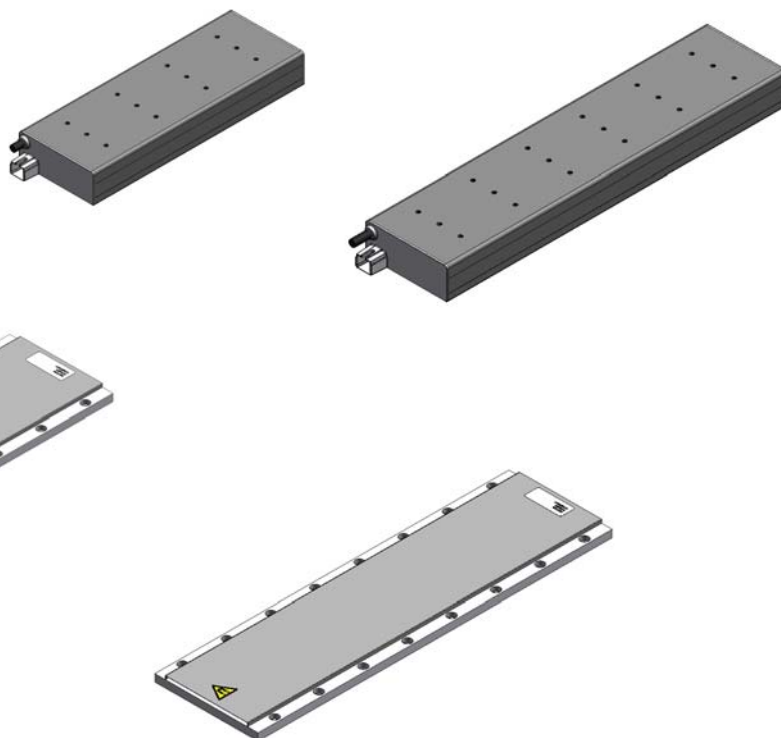
FORCE [N]

1200/1600

MOTOR DIMENSIONS



Magnet Track		Moving Coil	
Type	L (mm)	Type	A (mm)
100-120	120	100.1200	522
100-240	240	100.1600	690
100-480	480		



SERIES

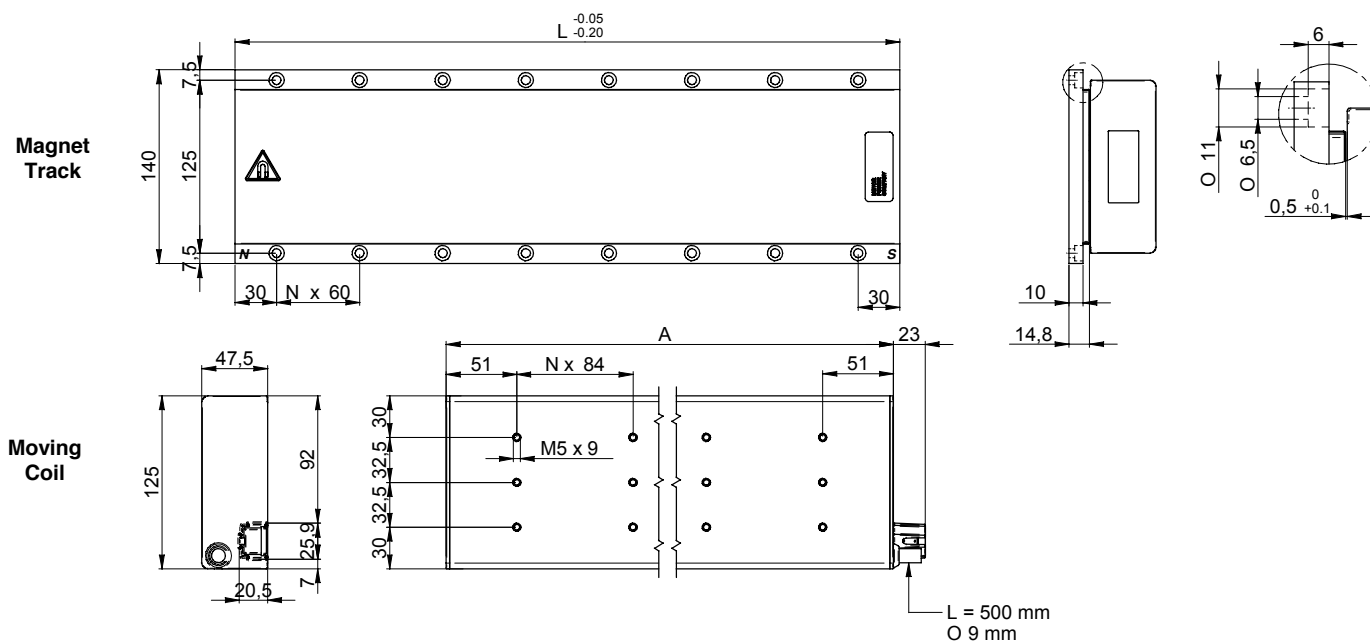
SKA

DDL 100

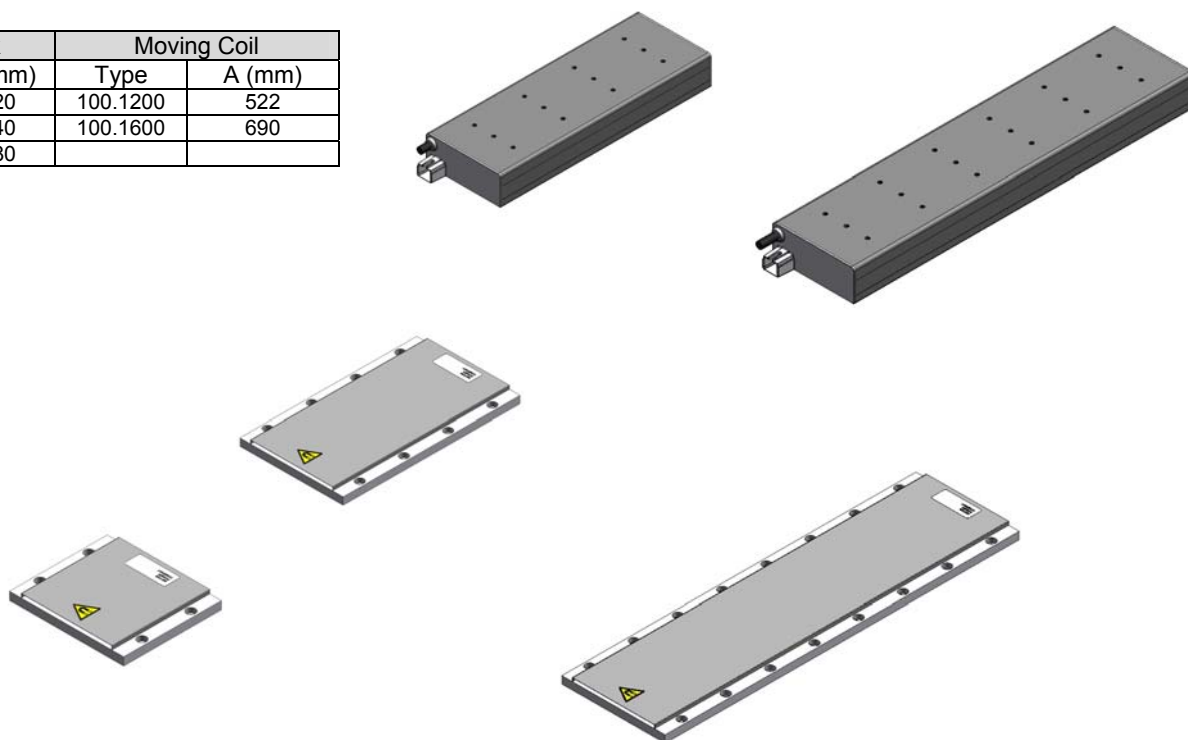
FORCE [N]

1200/1600

MOTOR DIMENSIONS



Magnet Track		Moving Coil	
Type	L (mm)	Type	A (mm)
100-120	120	100.1200	522
100-240	240	100.1600	690
100-480	480		



SERIES

SKA DDL 125.2000

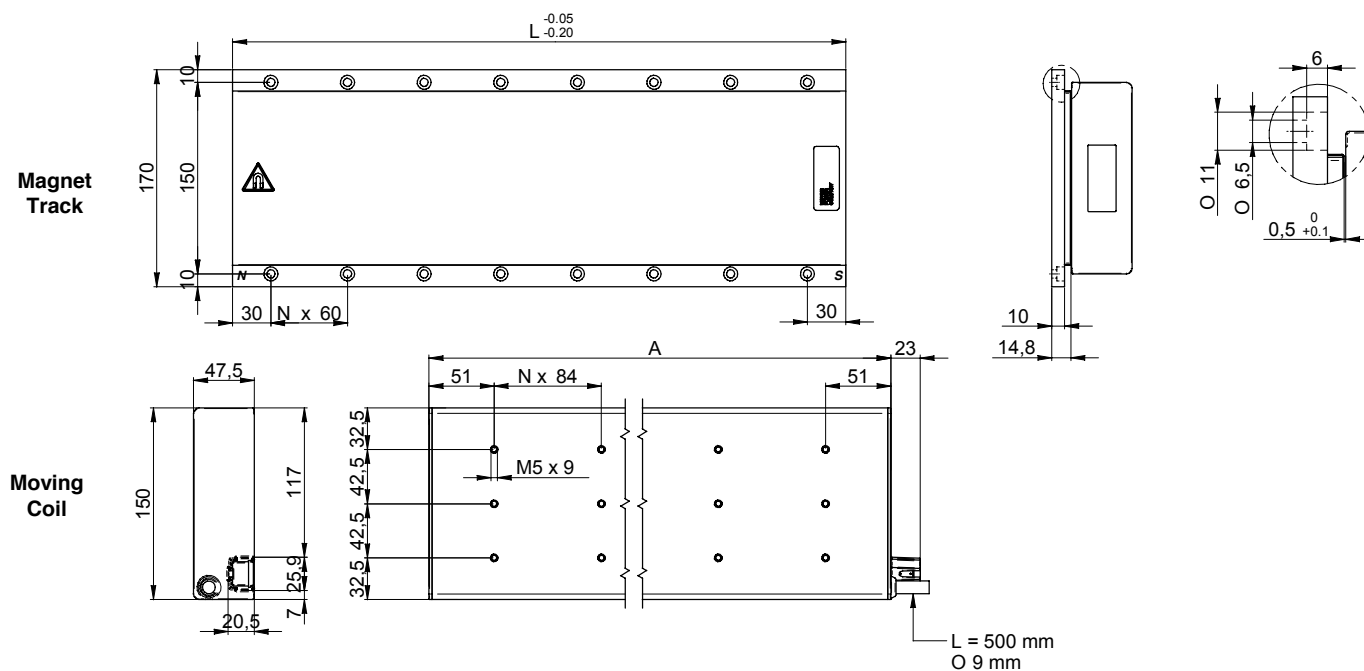
FORCE [N]

2000

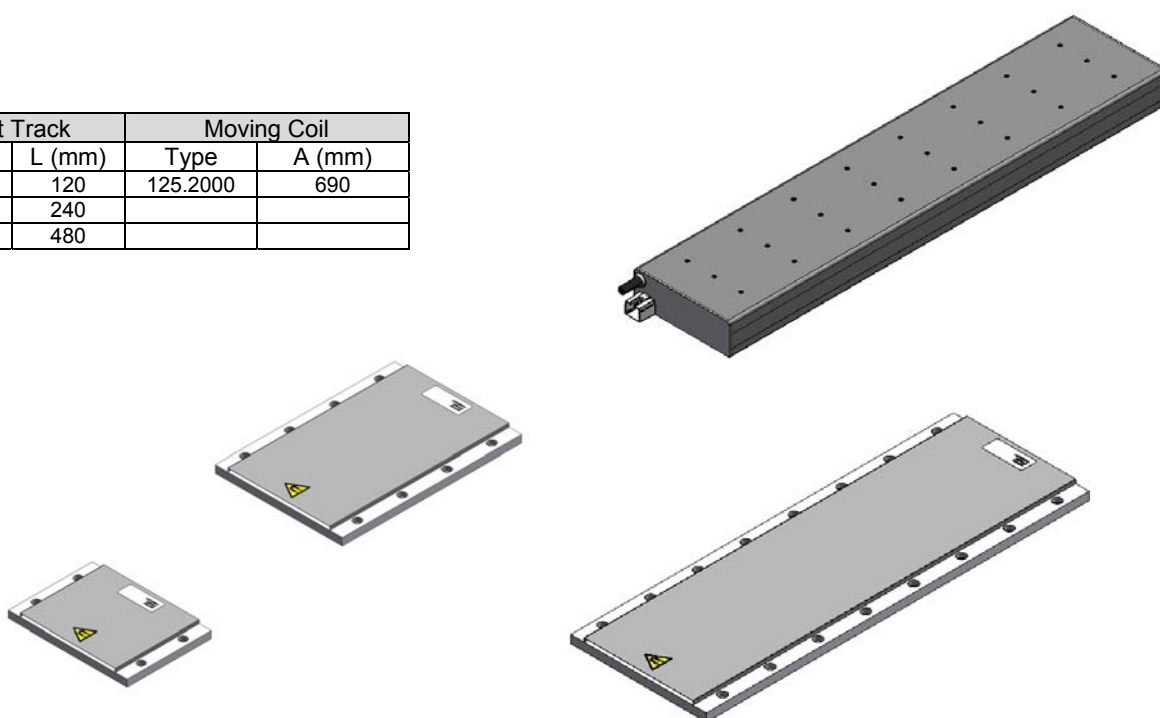
SINEWAVE FORM			SYMBOL	UNITS	TYPE OF WINDING XX = preferential winding									
MOTR SPEED	Vn drive 145 V (ac) 3phase		[m/s]	17										
	Vn drive 230 V (ac) 3phase		[m/s]	1.5										
	Vn drive 400 V (ac) 3phase		[m/s]	3										
MOTOR RATINGS	COMMON RATINGS													
	Voltage constant ± 5%	Ke	[Vrms/m/s]	97										
	Pole pitch	P	[mm]	24										
	Temperature range	Tr	[°C]	0 ÷ 40°										
	SKA DDL 125.2000													
	Continuous force(0 m/s)	Fn0	[N]	2000										
	Peak force	Fmax	[N]	6000										
	Force constant ± 5%	Kf	[N/Arms]	151										
	Rated current (0 m/s)	In0	[Arms]	13.57										
	Peak current	I fmax	[Arms]	52.9										
	Phase/phase res. ± 5% a 20°C	Rff	[Ohm]	1.55										
	Phase/phase inductance	Lff	[mH]	29										
	Electrical time constant	Te	[msec]	19										
	Attraction force	Fm	[N]	9826										
	Power loss	Pd	[W]	600										
	Thermal resistance	Rth	[°C/W]	0.15										
	Motor constant	Km	[N/√W]	81.6										
Continuous force(0 m/s)			Fn0	[N]										
Peak force			Fmax	[N]										
Force constant ± 5%			Kf	[N/Arms]										
Rated current (0 m/s)			In0	[Arms]										
Peak current			I fmax	[Arms]										
Phase/phase res. ± 5% a 20°C			Rff	[Ohm]										
Phase/phase inductance			Lff	[mH]										
Electrical time constant			Te	[msec]										
Attraction force			Fm	[N]										
Power loss			Pd	[W]										
Thermal resistance			Rth	[°C/W]										
Motor constant			Km	[N/√W]										
THERMAL PROTECTION	Type of thermal cut-off			N C : normally closed										
	Rated voltage	Vn	[Vac]	250										
	Rated current	In	[A]	2.5										
	Operative temperature	Tn	[°C]	130 °C ± 5%										
	Resetting temperature	Tr	[°C]	100 °C ± 15°C										
	Operative time		[ms]	1										
	Insulation class			F										
	Datasheet n°: SKADDL – 2008-03-00													

Datasheet n°: SKADDL – 2008-03-00

MOTOR DIMENSIONS



Magnet Track		Moving Coil	
Type	L (mm)	Type	A (mm)
125-120	120	125.2000	690
125-240	240		
125-480	480		



SERIES

FORCE [N]

SKA DDL 150.2400**2400**

SINEWAVE FORM			SYMBOL	UNITS	TYPE OF WINDING XX = preferential winding									
MOTOR SPEED				17										
	Vn drive 145 V (ac) 3phase			[m/s]		1.1								
	Vn drive 230 V (ac) 3phase			[m/s]		1.5								
	Vn drive 400 V (ac) 3phase			[m/s]		3								
MOTOR RATINGS	COMMON RATINGS													
	Voltage constant ± 5%			Ke	[Vrms/m/s]		97							
	Pole pitch			P	[mm]		24							
	Temperature range			Tr	[°C]		0 ÷ 40°							
	SKA DDL 150.2400													
	Continuous force(0 m/s)			Fn0	[N]		2400							
	Peak force			Fmax	[N]		7200							
	Force constant ± 5%			Kf	[N/Arms]		151							
	Rated current (0 m/s)			In0	[Arms]		16.27							
	Peak current			I fmax	[Arms]		52.9							
	Phase/phase res. ± 5% a 20°C			Rff	[Ohm]		1.25							
	Phase/phase inductance			Lff	[mH]		26							
	Electrical time constant			Te	[msec]		20							
	Attraction force			Fm	[N]		11790							
	Power loss			Pd	[W]		700							
	Thermal resistance			Rth	[°C/W]		0.13							
	Motor constant			Km	[N/√W]		90.7							
THERMAL PROTECTION														
	Continuous force(0 m/s)			Fn0	[N]									
	Peak force			Fmax	[N]									
	Force constant ± 5%			Kf	[N/Arms]									
	Rated current (0 m/s)			In0	[Arms]									
	Peak current			I fmax	[Arms]									
	Phase/phase res. ± 5% a 20°C			Rff	[Ohm]									
	Phase/phase inductance			Lff	[mH]									
	Electrical time constant			Te	[msec]									
	Attraction force			Fm	[N]									
	Power loss			Pd	[W]									
	Thermal resistance			Rth	[°C/W]									
	Motor constant			Km	[N/√W]									
	Type of thermal cut-off			N C : normally closed										
	Rated voltage			Vn	[Vac]		250							
	Rated current			In	[A]		2.5							
	Operative temperature			Tn	[°C]		130 °C ± 5%							
Resetting temperature			Tr	[°C]		100 °C ± 15°C								
Operative time				[ms]		1								
Insulation class			F											
													Datasheet n°: SKADDL – 2008-03-00	

Datasheet n°: SKADDL – 2008-03-00

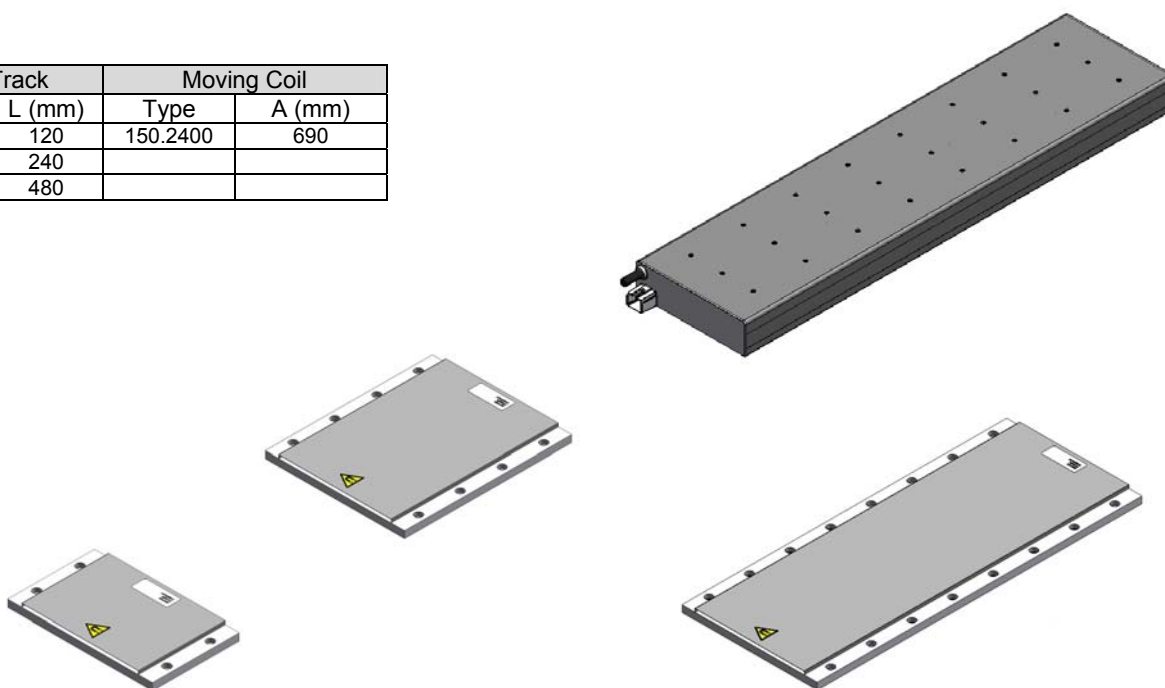
SKA

DDL 150

2400

[illegible]

Magnet Track		Moving Coil	
Type	L (mm)	Type	A (mm)
150-120	120	150.2400	690
150-240	240		
150-480	480		





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