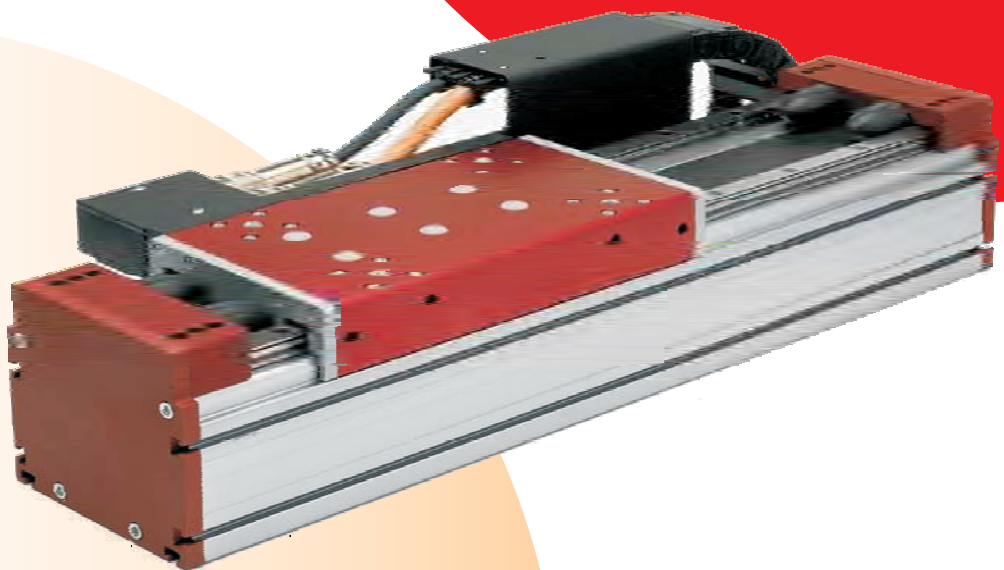


SKA *COMPACT*

ALL IN ONE
Linear Axes



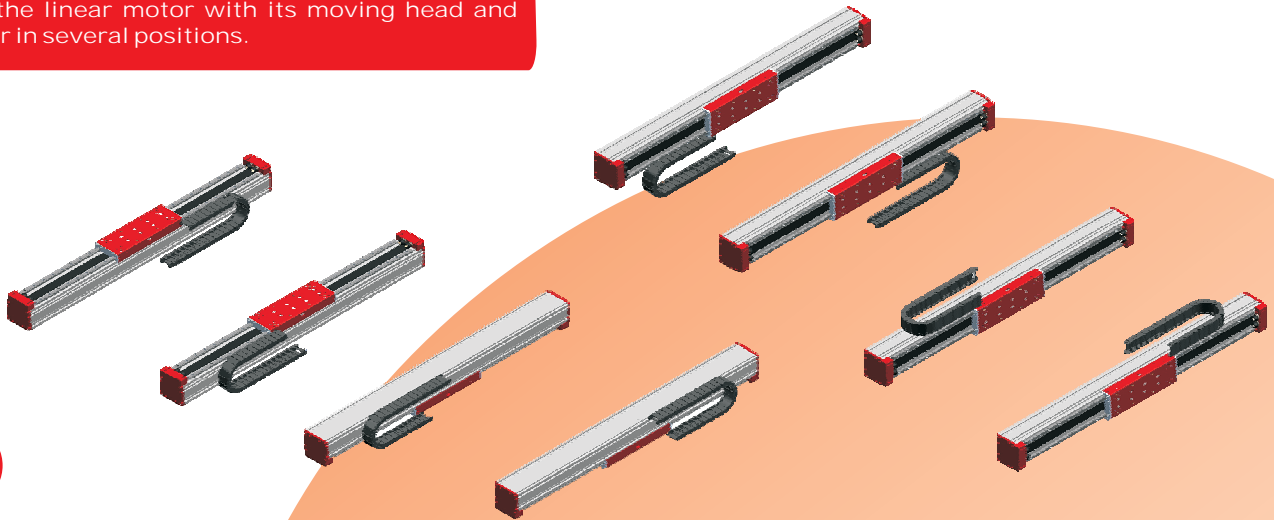
SKA COMPACT

Cutting-edge *all in one* linear axis based on iron core technology. A range of three sizes with aluminium carrying structure. The power components, moving coil and magnetic track, are preassembled and equipped with thermal sensor, moving head, linear guideways, encoder, stroke stopper, cables and cable carrier. A flexible motor payload capacity allows its fitting on any extruded structure side and in any direction.

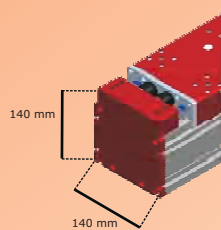
- 275N and 550N continuous force (825N and 1650N peak force)
- 5m/s speed
- 5g (50m/s²) acceleration
- 0,01 to 0,1 mm accuracy
- All mechanical components are completely sealed off for a high degree of protection
- Optional safety brake
- Feedback options: optical or magnetic encoder, Sin Cos, TTL and absolute encoder, Hall Sensor.



SKA COMPACT: the linear axis flexibility allows to employ the linear motor with its moving head and cable carrier in several positions.



SKA COMPACT



SKA C 140.275

SKA C 140.550

Peak Force	(N)	825	1650
Continuous Force	(N)	275	550
Speed	(m/s)	5	5
Acceleration	(m/s ²)	50	50
Stroke		500 ÷ 3000 mm	

How to order SKA COMPACT

SKA C 140.275 15 1000 00 007 01

Series name Model Winding Stroke Hall Sensors Encoder Feedback Connectors

140.275
140.550

See data sheet

00 Without Hall Sensor
01 With Hall Sensor

006 TTL magnetic encoder 2 μm/P 2mm
Max speed 2m/sec

007 TTL magnetic encoder 10 μm/P 2mm
Max speed 4m/sec

008 TTL optical encoder 5 μm/P 200μm
Max speed 9m/sec

015 Sin-Cos optical encoder P 40μm
Max speed 10m/sec

019 TTL optical encoder 1 μm/P 200μm
Max speed 3m/sec

021 Sin-Cos optical encoder P 200μm
Max speed 10m/sec

024 TTL magnetic encoder 1 μm/P 2mm
Max speed 2m/sec

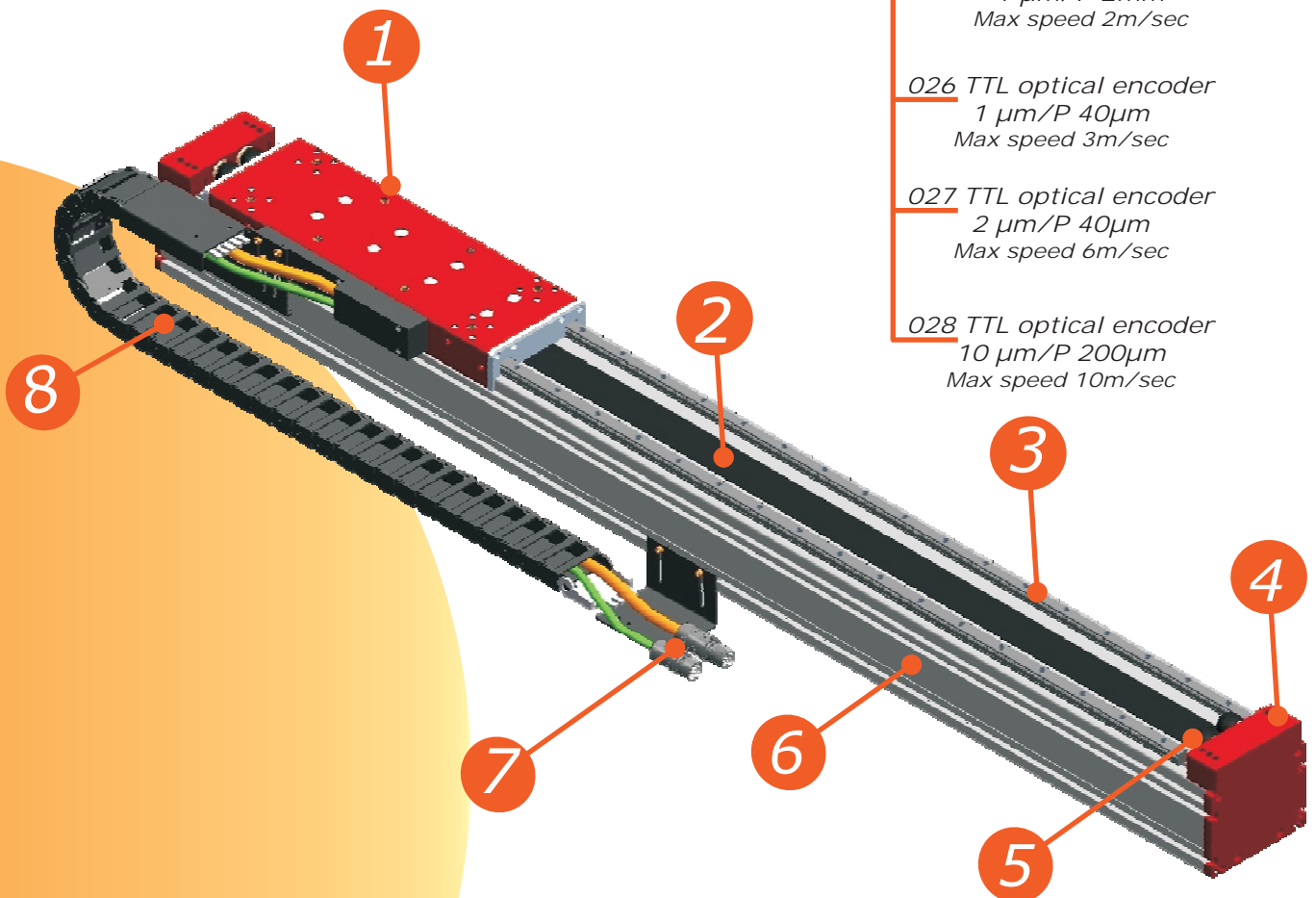
026 TTL optical encoder 1 μm/P 40μm
Max speed 3m/sec

027 TTL optical encoder 2 μm/P 40μm
Max speed 6m/sec

028 TTL optical encoder 10 μm/P 200μm
Max speed 10m/sec

01 Double Connector M23

- ① Moving head
- ② Protection cover
- ③ Linear guideways
- ④ Stroke stopper
- ⑤ Rubber bumpers
- ⑥ Aluminium extruded profile
- ⑦ Connectors
- ⑧ Cable carrier chain with dynamic laying cables



SERIES

SKA COMPACT

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° \div + 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° \div + 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° \div + 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

SERIES

SKA COMPACT

**TRANSDUCER
SERIES PAGE 2**

SIN COS OPTICAL ENCODER P40µm (FEEDBACK ORDER NR. 015)

RATED VOLTAGE	Vn	[Vdc]	5 ± 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	[µm]	Function of the interpolator
ACCURACY	A	[µm]	± 5 µm/m
OPTICAL LINE PITCH	P	[µm]	40
MAX SPEED	S	[m/s]	It depends of interpolator

TTL MAGNETIC ENCODER (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

HALL SENSOR

RATED VOLTAGE	Vn	[Vdc]	5 ÷ 24
RATED CURRENT	In	[mA]	100
WORKING TEMPERATURE	Tn	[°C]	-20° ÷ +100°
N° OF COMMUTATION SIGNALS			3 Common Mode 5v

TRANSDUCERS

IRON CORE LINEAR AXES "ALL IN ONE"



SERIES

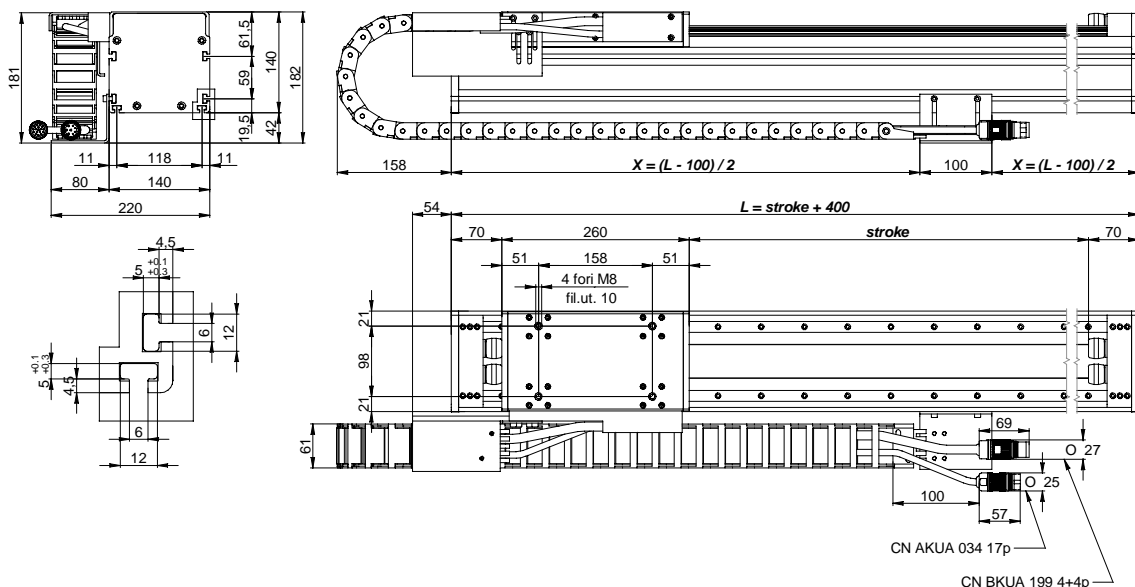
SKA COMPACT 140.275

FORCE [N]

275

	SINEWAVE FORM	SIMBOLS	UNITS	WINDING TYPE			
				15	16	17	31
MOTOR SPEED	Vn drive 3phase 230 V (ac)		[m/s]	3	2	1.5	1
	Vn drive 3phase 400 V (ac)		[m/s]	5	4	3	2
FEATURES							
	Voltage constant ± 5%	Ke	[Vrms/m/s]	55	72	97	116
	Pole Pitch	P	[mm]	24			
	Temperature range	Tr	[°C]	0 ÷ 40°			
SKAC. 140.275							
MOTOR RATINGS	Continuous force (0 m/s)	F _{n0}	[N]	275			
	Peak force	F _{max}	[N]	825			
	Force constant ± 5%	K _f	[N/Arms]	91	121	161	192
	Rated current (0 m/s)	I _{n0}	[Arms]	3.0	2.28	1.71	1.43
	Peak current	I _{fmax}	[Arms]	12.0	9.13	6.84	5.7
	Phase/phase res. ± 5% a 20°C	R _{ff}	[Ohm]	4.9	8.8	15	23
	Phase/phase inductance	L _f	[mH]	68	120	206	325
	Electrical time constant	T _e	[msec]	13.8			
	Attractive force	F _m	[N]	1202			
	Dissipated power	P _d	[W]	96			
	Thermal resistance	R _{th}	[°C/W]	0.94			
	Motor constant	K _m	[N/√W]	28.1			
	Moving head weight		[kg]	7			
	THERMAL PROTECTION	Type of thermal cut - off			N C : normally closed		
Rated voltage		V _n	[Vac]	250			
Rated current		I _n	[A]	2.5			
Operative temperature		T _n	[°C]	130 °C ± 5%			
Resetting temperature		Tr	[°C]	100 °C ± 15°C			
Operative time			[ms]	1			
Insulation class				F			

SKA COMPACT 140.275
OVERALL DIMENSIONS



IRON CORE LINEAR AXES "ALL IN ONE"



SERIES

SKA COMPACT 140.550

FORCE [N]

550

	SINEWAVE FORM	SIMBOLS	UNITS	WINDING TYPE		
				16	17	31
MOTOR SPEED	Vn drive 3phase 230 V (ac)		[m/s]	2	1.5	1
	Vn drive 3phase 400 V (ac)		[m/s]	4	3	2
MOTOR RATINGS	FEATURES					
	Voltage constant ± 5%	Ke	[Vrms/m/s]	72	97	116
	Pole Pitch	P	[mm]	24		
	Temperature range	Tr	[°C]	0 ÷ 40°		
	SKAC. 140.550					
	Continuous force (0 m/s)	Fn0	[N]	550		
	Peak force	Fmax	[N]	1650		
	Force constant ± 5%	Kf	[N/Arms]	113	151	192
	Rated current (0 m/s)	In0	[Arms]	4.87	3.65	2.86
	Peak current	I fmax	[Arms]	19.47	14.59	11.4
	Phase/phase res. ± 5% a 20°C	Rff	[Ohm]	4.4	7.5	12
	Phase/phase inductance	Lff	[mH]	60	103	162
	Electrical time constant	Te	[msec]	13.8		
	Attractive force	Fm	[N]	2405		
	Dissipated power	Pd	[W]	192		
Thermal resistance	Rth	[°C/W]	0.47			
Motor constant	Km	[N/√W]	39.7			
Moving head weight		[kg]	12			
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		

SKA COMPACT 140.550
OVERALL DIMENSIONS

