

HG/HN

LINEAR MOTOR AXES | HG/HN LINEAR AXIS



HG/HN LINEAR MOTOR AXES

TWO SIZES

The two sizes of the HG axis: HG 25 with a peak force of 180 N, and HG 12 with a peak force of 110 N

FREELY AND INTUITIVELY PROGRAMMABLE

W.A.S. 2 – WEISS Application Software: secure and fast commissioning with free-of-charge user software.



OKU relies on the perfect combination of HN and HL axes for its ball bearing assembly cell. User-programmable linear motor axes are the ideal choice for extremely fast process movements and strict requirements in terms of both dynamic performance and precision.



The latest in uncompromising, highly dynamic drive technology for your basic axis. Highly integrated and ready for installation. Compact and precise ball-type linear guides and an absolute measuring system are just as much a part of the concept as the automatic lubrication. The HN version is available in many different sizes – with a robust steel body or lightweight aluminium body. The aluminium profile-based HG axes can also be used in areas in which cost factors have typically made conventional drives the standard choice in the past: the most advanced linear technology at extremely attractive conditions. Both versions impress with their smooth movements and maximum dynamics.

ADVANTAGES

- Freely positionable
- Extremely high dynamic performance thanks to direct drive
- Low maintenance costs
- Low energy costs
- Compact design
- Convincing price-quality ratio (particularly in the case of HG axes)
- HN axes with high power density available in many different sizes
- HG axes with covered guide profile with standard attachment options

GENERAL INFORMATION

- The HG model range comes with lifetime lubrication, making maintenance intervals a thing of the past.
- All motors are equipped with overtemperature protection (PTC)
- The installation location of the linear axes can be freely chosen

OPTIONS

- The HN linear axes can be equipped with manual or automatic lubrication
- Multiple carriages on a single axis
- Absolute measuring systems
- Functional safety (secure encoder attachment)

HG 12A

TECHNICAL DATA

U	Voltage range:	200-600 V _{AC Effektiv}
a_{Max}	Max. acceleration:	40 m/s ²
v_{Max}	Max. speed:	4 m/s
F_{N mot}	Nominal force:	33 N
F_{P mot}	Peak force:	102 N
I_p	Peak current:	2 A
	Temperature monitoring:	PTC
s_{Max}	Max. stroke:	bis 1000 mm in 100 mm
	Repeat accuracy:	0.005 mm
m_{rec}	Max. recommended load:	5 kg
m_{gui 0}	Mass of the guide rail with 0 mm stroke:	1.44 kg
m_{gui 100}	Mass of the guide rail per 100 mm stroke:	0.72 kg
m_{carr}	Mass of the brake:	1.45 kg

LOAD DATA (static)

M_{X stat}	Max. static moment about the X-axis:	150 Nm
M_{Y stat}	Max. static moment about the Y-axis:	40 Nm
M_{Z stat}	Max. static moment about the Z-axis:	150 Nm
F_{X stat}	Max. static force in the Y-axis:	150 N
F_{Z stat}	Max. static force in the Z-axis:	300 N

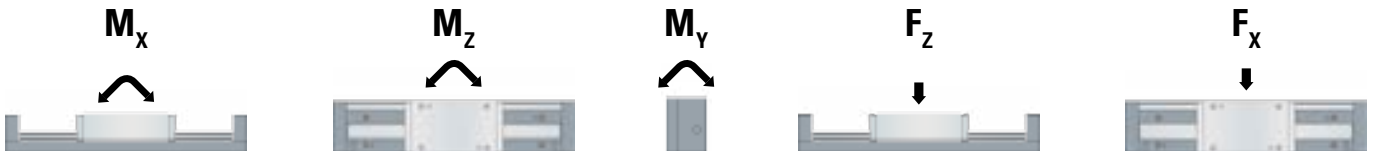
LOAD DATA (dynamic)

M_{X dyn}	Max. dynamic moment about the X-axis:	20 Nm
M_{Y dyn}	Max. dynamic moment about the Y-axis:	8 Nm
M_{Z dyn}	Max. dynamic moment about the Z-axis:	20 Nm
F_{X dyn}	Max. dynamic force in the X-axis:	100 N
F_{Z dyn}	Max. dynamic force in the Z-axis:	150 N

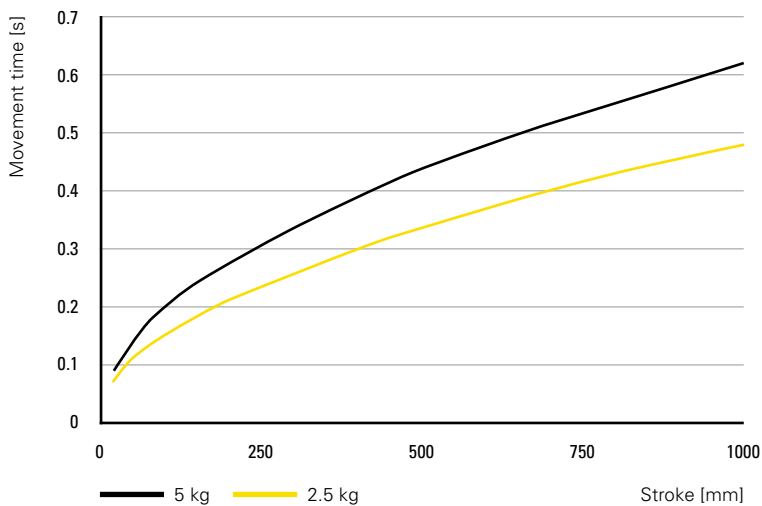
ENCODER

Balluff	sin/cos
Balluff	BISS
Balluff	SSI
Balluff (Rockwell, Mitsubishi)	TTL

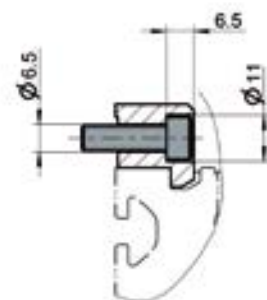
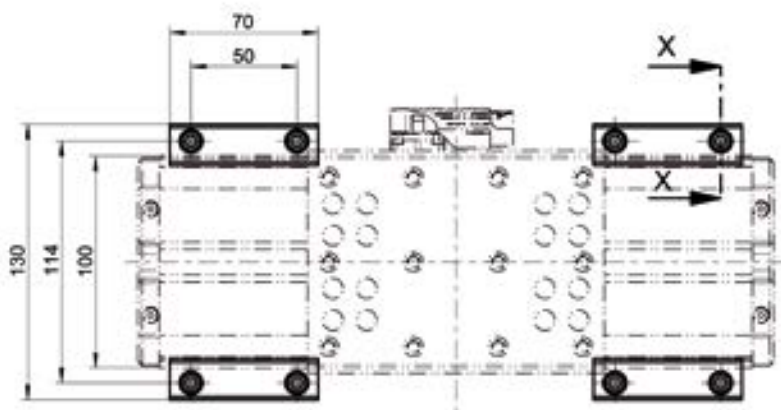
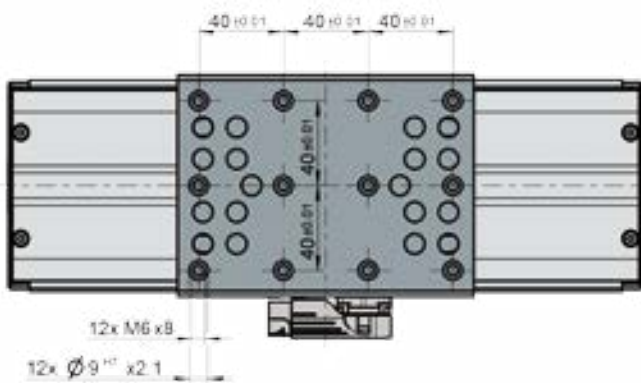
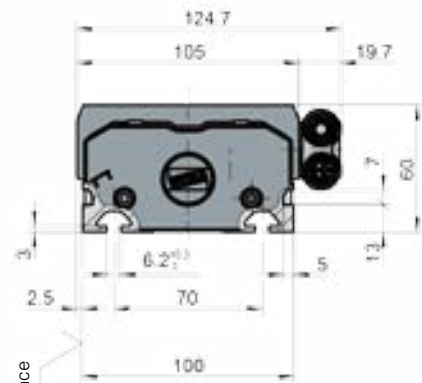
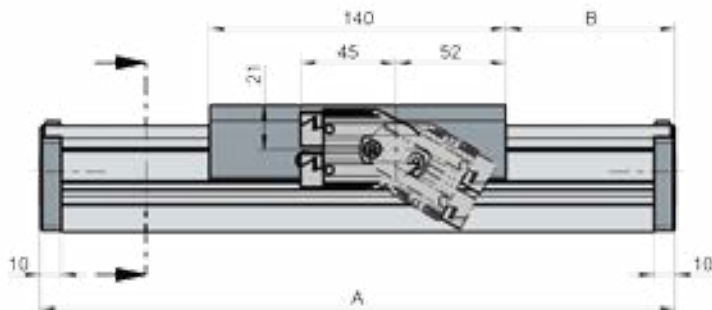
LOAD DATA



TIMING DIAGRAM



DIMENSIONS



X-X (1:1)

Standard strokes	A	B
100	324	79.5
200	424	129.5
300	524	179.5
400	624	229.5
500	724	279.5
600	824	329.5
700	924	379.5
800	1024	429.5
900	1124	479.5
1000	1224	529.5

HG 25A

TECHNICAL DATA

U	Voltage range:	200-600 V _{AC Effektiv}
a_{Max}	Max. acceleration:	40 m/s ²
v_{Max}	Max. speed:	4 m/s
F_{N mot}	Nominal force:	65 N
F_{P mot}	Peak force:	180 N
I_P	Peak current:	6 A
	Temperature monitoring:	PTC
s_{Max}	Max. stroke:	bis 1000 mm in 100 mm
	Repeat accuracy:	0.005 mm
m_{rec}	Max. recommended load:	10 kg
m_{gui 0}	Mass of the guide rail with 0 mm stroke:	2.24 kg
m_{gui 100}	Mass of the guide rail per 100 mm stroke:	1 kg
m_{carr}	Mass of the brake:	2.05 kg

LOAD DATA (static)

M_{X stat}	Max. static moment about the X-axis:	200 Nm
M_{Y stat}	Max. static moment about the Y-axis:	100 Nm
M_{Z stat}	Max. static moment about the Z-axis:	200 Nm
F_{X stat}	Max. static force in the Y-axis:	250 N
F_{Z stat}	Max. static force in the Z-axis:	500 N

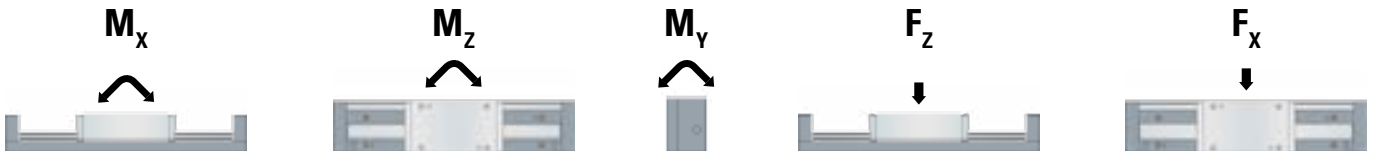
LOAD DATA (dynamic)

M_{X dyn}	Max. dynamic moment about the X-axis:	30 Nm
M_{Y dyn}	Max. dynamic moment about the Y-axis:	15 Nm
M_{Z dyn}	Max. dynamic moment about the Z-axis:	30 Nm
F_{X dyn}	Max. dynamic force in the X-axis:	150 N
F_{Z dyn}	Max. dynamic force in the Z-axis:	200 N

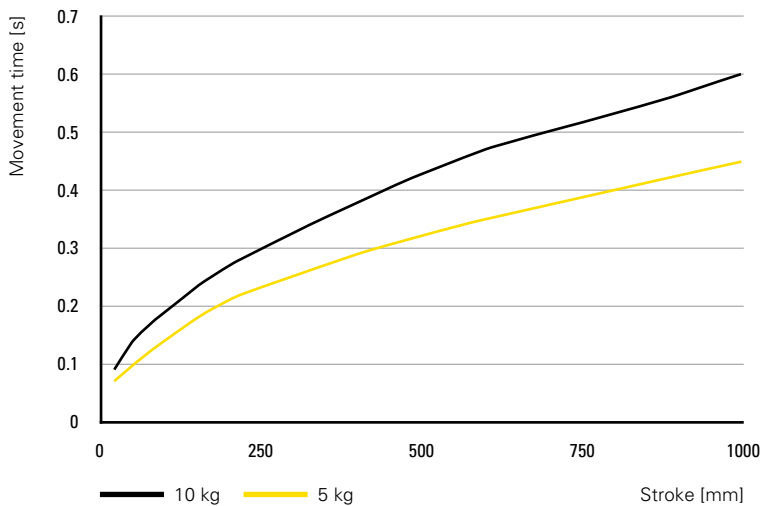
ENCODER

Balluff	sin/cos
Balluff	BISS
Balluff	SSI
Balluff (Rockwell, Mitsubishi)	TTL

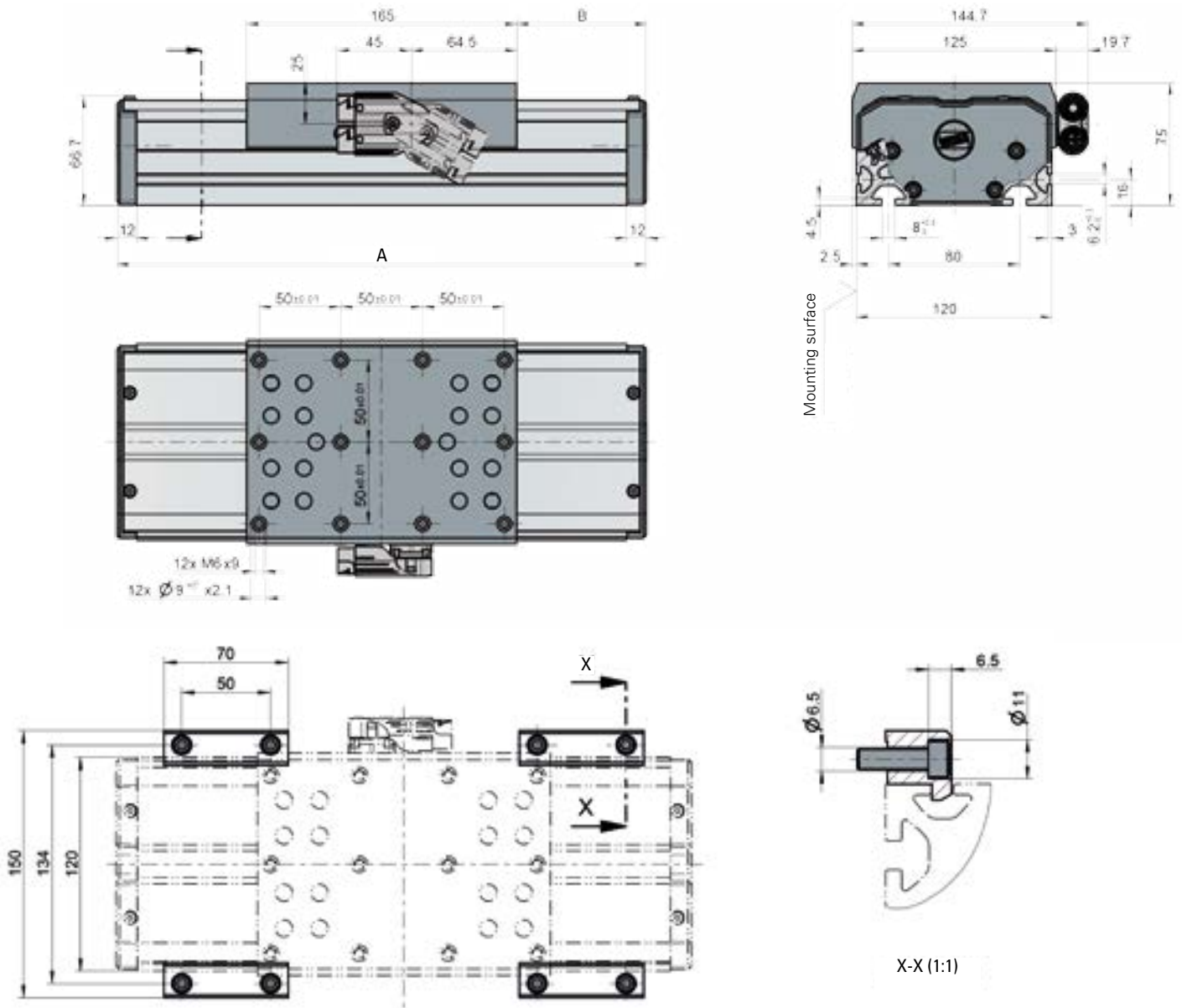
LOAD DATA



TIMING DIAGRAM



DIMENSIONS



Standard strokes	A	B
100	300	80
200	400	130
300	500	180
400	600	230
500	700	280
600	800	330
700	900	380
800	1000	430
900	1100	480
1000	1200	530

HN 50

TECHNISCHE DATEN

U	Voltage range:	200-600 V _{AC Effektiv}
a_{Max}	Max. acceleration:	40 m/s ²
v_{Max}	Max. speed:	4 m/s
F_{N mot}	Nominal force:	65 N
F_{P mot}	Peak force:	180 N
I_P	Peak current:	6 A
s_{Max}	Max. stroke:	bis 1000 mm in 100 mm
	Repeat accuracy:	0.005 mm
m_{rec}	Max. recommended load:	15 kg
m_{gui 0}	Mass of the guide rail with 0 mm stroke:	2.51 kg (Alu)
m_{gui 100}	Mass of the guide rail per 100 mm stroke:	0.83 kg (Alu)
m_{carr}	Mass of the brake:	2.2 kg (Alu)

LOAD DATA (static)

M_{X stat}	Max. static moment about the X-axis:	200 Nm
M_{Y stat}	Max. static moment about the Y-axis:	50 Nm
M_{Z stat}	Max. static moment about the Z-axis:	200 Nm
F_{X stat}	Max. static force in the Y-axis:	250 N
F_{Z stat}	Max. static force in the Z-axis:	500 N

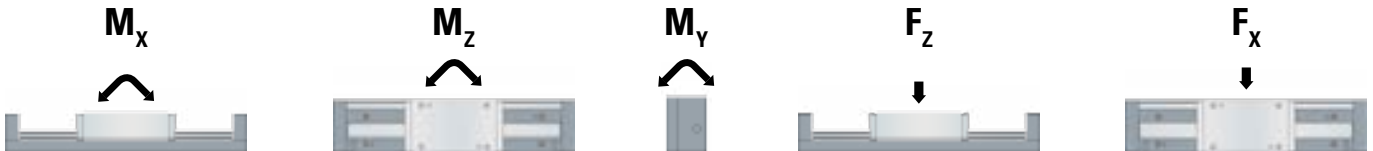
LOAD DATA (dynamic)

M_{X dyn}	Max. dynamic moment about the X-axis:	20 Nm
M_{Y dyn}	Max. dynamic moment about the Y-axis:	10 Nm
M_{Z dyn}	Max. dynamic moment about the Z-axis:	20 Nm
F_{X dyn}	Max. dynamic force in the X-axis:	100 N
F_{Z dyn}	Max. dynamic force in the Z-axis:	150 N

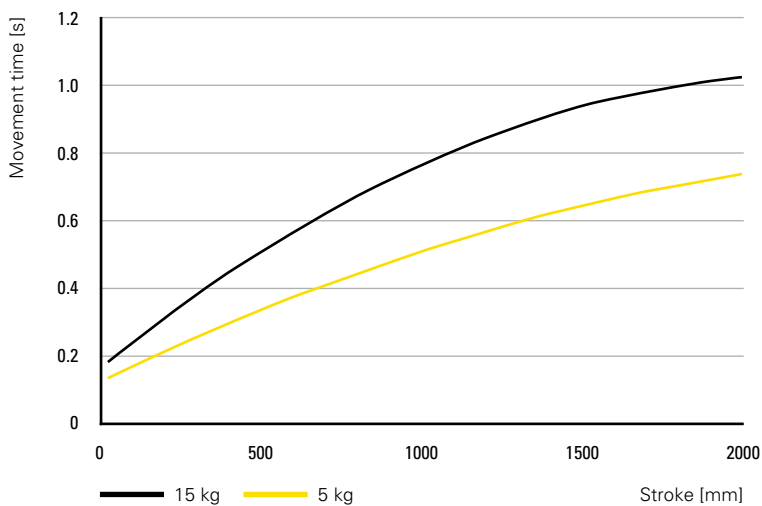
ENCODER

Balluff	sin/cos
Balluff	BISS
Balluff	SSI

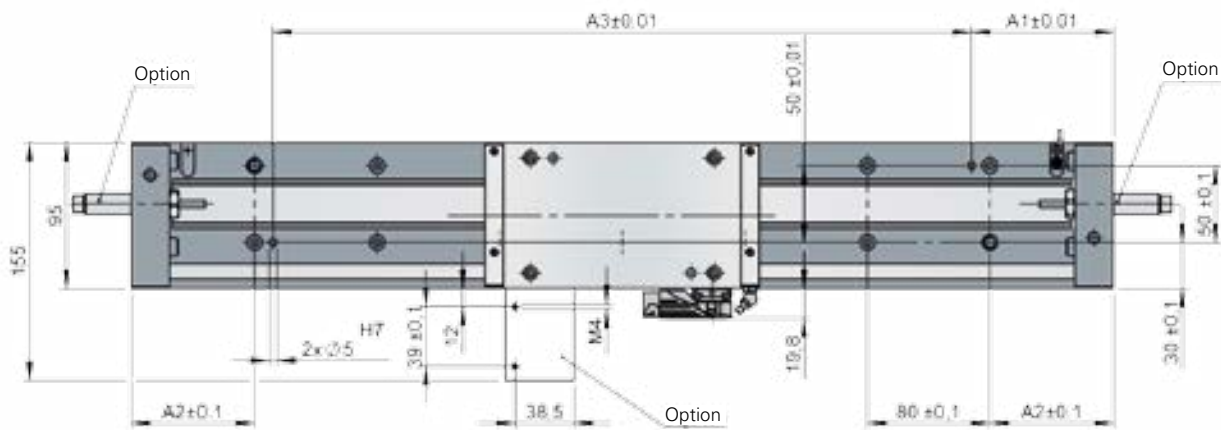
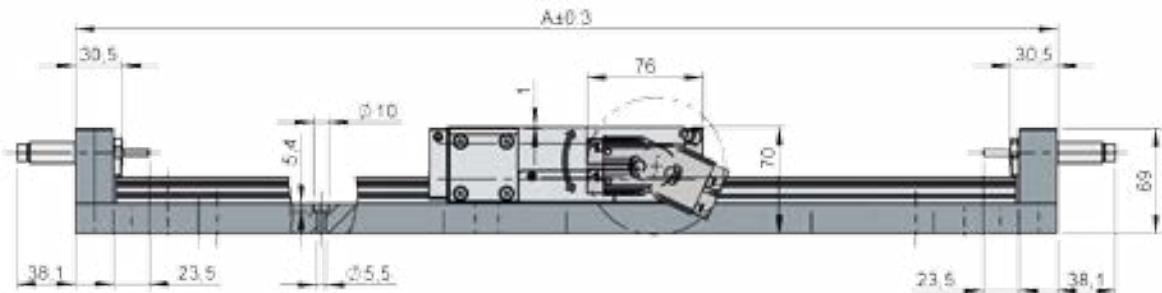
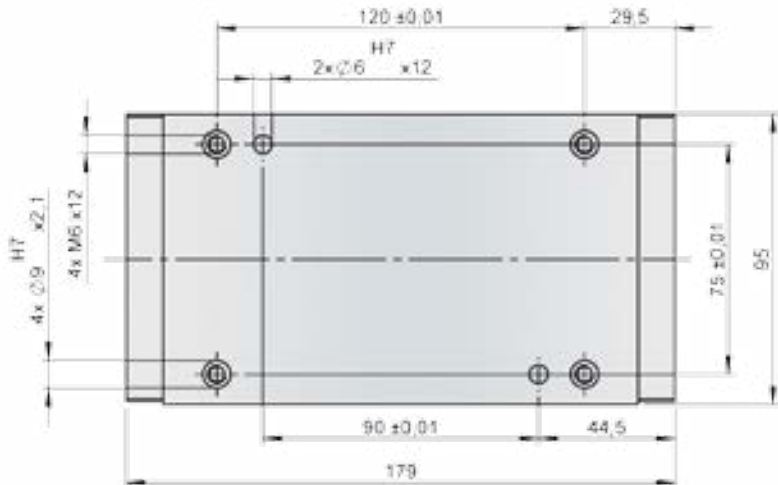
LOAD DATA



TIMING DIAGRAM



DIMENSIONS



Standard strokes (Examples)	A	A1	A2	A3
300	730	100	125	530
500	930	115	65	700
1000	1430	115	75	1200

Intermediate strokes available in 100 mm steps on request

HN 100

TECHNICAL DATA

U	Voltage range:	200-600 V _{AC Effektiv}
a_{Max}	Max. acceleration:	40 m/s ²
v_{Max}	Max. speed:	4 m/s
F_{N mot}	Nominal force:	150 N
F_{P mot}	Peak force:	380 N
I_P	Peak current:	9.5 A
s_{Max}	Max. stroke:	bis 1000 mm in 100 mm; > 1000 mm auf Anfrage
	Repeat accuracy:	0.005 mm
m_{rec}	Max. recommended load:	25 kg
m_{gui 0}	Mass of the guide rail with 0 mm stroke:	5.59 kg (Alu)
m_{gui 100}	Mass of the guide rail per 100 mm stroke:	1.61 kg (Alu)
m_{carr}	Mass of the brake:	4.7 kg (Alu)

LOAD DATA (static)

M_{X stat}	Max. static moment about the X-axis:	350 Nm
M_{Y stat}	Max. static moment about the Y-axis:	100 Nm
M_{Z stat}	Max. static moment about the Z-axis:	350 Nm
F_{X stat}	Max. static force in the Y-axis:	500 N
F_{Z stat}	Max. static force in the Z-axis:	750 N

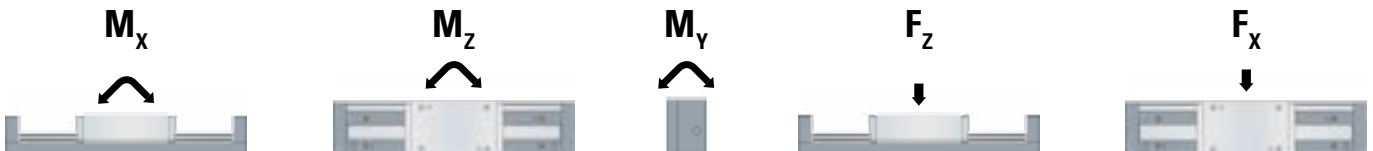
LOAD DATA (dynamic)

M_{X dyn}	Max. dynamic moment about the X-axis:	40 Nm
M_{Y dyn}	Max. dynamic moment about the Y-axis:	15 Nm
M_{Z dyn}	Max. dynamic moment about the Z-axis:	40 Nm
F_{X dyn}	Max. dynamic force in the X-axis:	150 N
F_{Z dyn}	Max. dynamic force in the Z-axis:	150 N

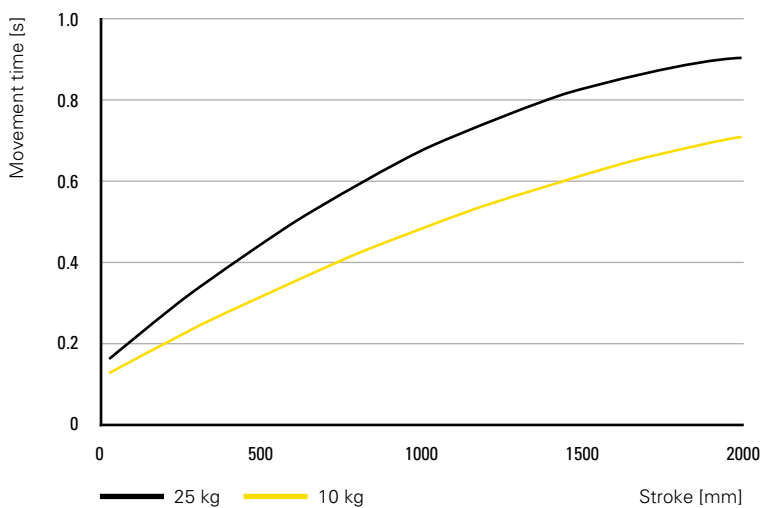
ENCODER

Balluff	sin/cos
Balluff	BISS
Balluff	SSI

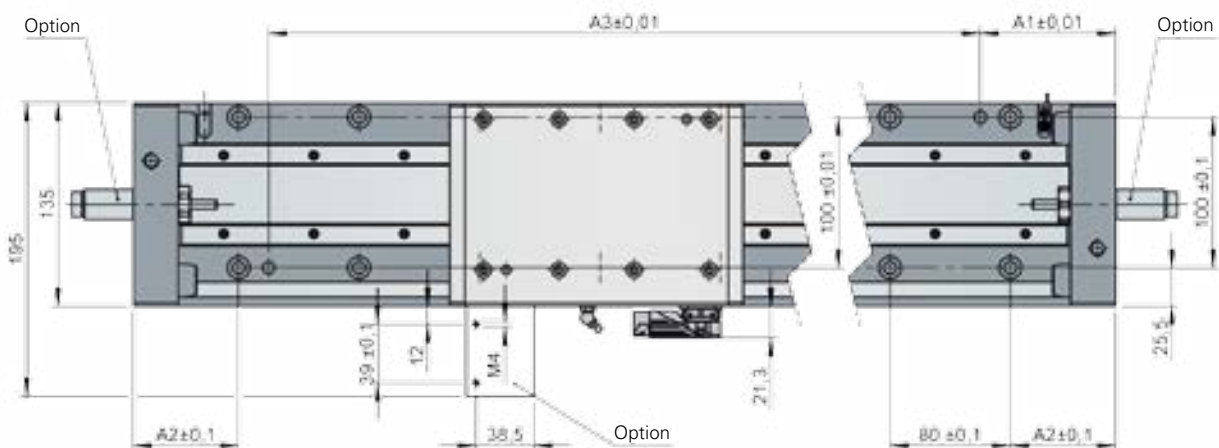
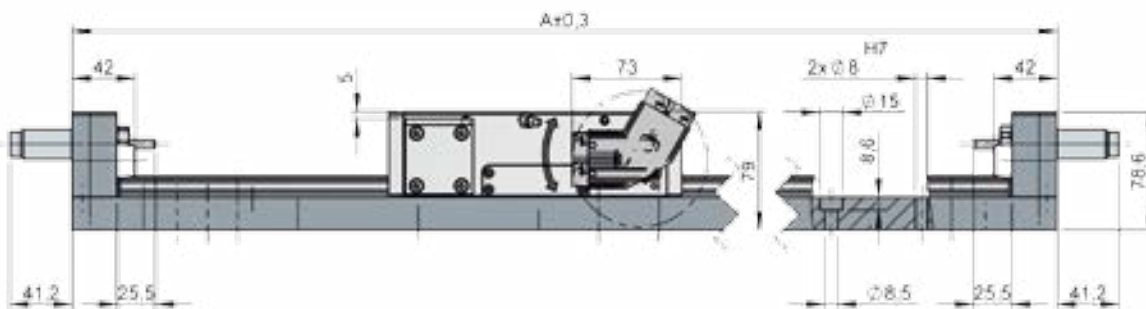
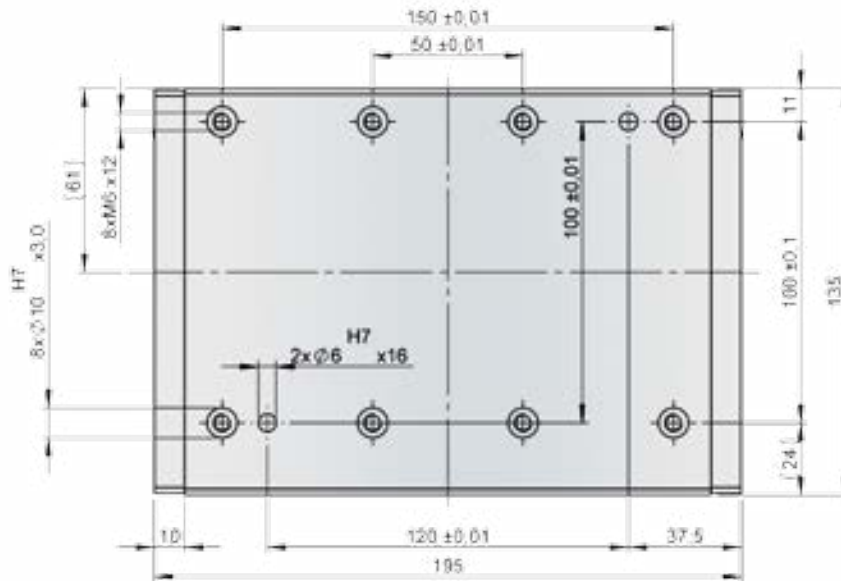
LOAD DATA



TIMING DIAGRAM



DIMENSIONS



Standard strokes (Examples)	A	A1	A2	A3
500	780	90	70	600
1000	1280	140	80	1000

Strokes larger than 1000 mm and intermediate strokes in 100 mm increments available on request

HN 200

TECHNICAL DATA

U	Voltage range:	200-600 V _{AC Effektiv}
a_{Max}	Max. acceleration:	40 m/s ²
v_{Max}	Max. speed:	4 m/s
F_{N mot}	Nominal force:	250 N
F_{P mot}	Peak force:	700 N
I_P	Peak current:	11.2 A
s_{Max}	Max. stroke:	bis 1000 mm in 100 mm; > 1000 mm auf Anfrage
	Repeat accuracy:	0.005 mm
m_{rec}	Max. recommended load:	50 kg
m_{gui 0}	Mass of the guide rail with 0 mm stroke:	9.59 kg (Alu)
m_{gui 100}	Mass of the guide rail per 100 mm stroke:	2.22 kg (Alu)
m_{carr}	Mass of the brake:	8.1 kg (Alu)

LOAD DATA (static)

M_{X stat}	Max. static moment about the X-axis:	500 Nm
M_{Y stat}	Max. static moment about the Y-axis:	200 Nm
M_{Z stat}	Max. static moment about the Z-axis:	500 Nm
F_{X stat}	Max. static force in the Y-axis:	750 N
F_{Z stat}	Max. static force in the Z-axis:	1000 N

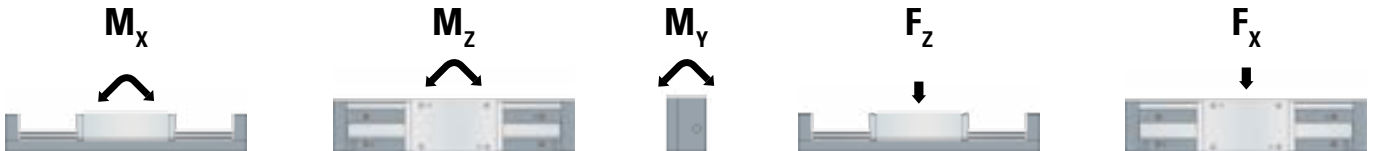
LOAD DATA (dynamic)

M_{X dyn}	Max. dynamic moment about the X-axis:	80 Nm
M_{Y dyn}	Max. dynamic moment about the Y-axis:	40 Nm
M_{Z dyn}	Max. dynamic moment about the Z-axis:	80 Nm
F_{X dyn}	Max. dynamic force in the X-axis:	250 N
F_{Z dyn}	Max. dynamic force in the Z-axis:	500 N

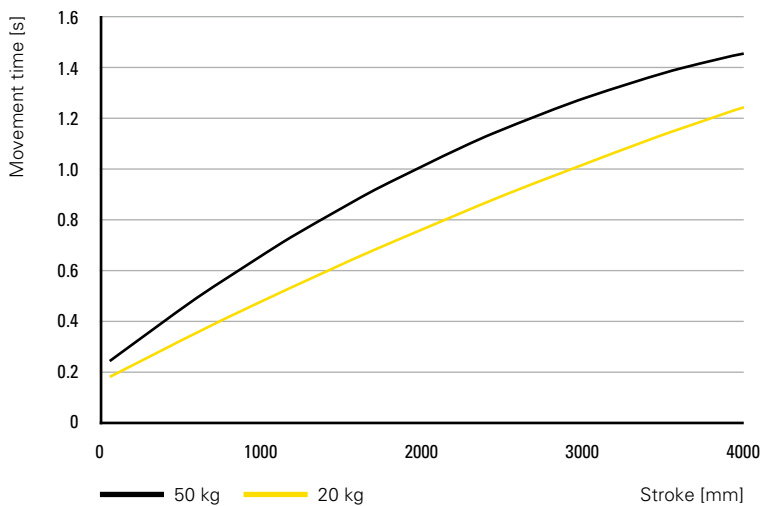
ENCODER

Balluff	sin/cos
Balluff	BISS
Balluff	SSI

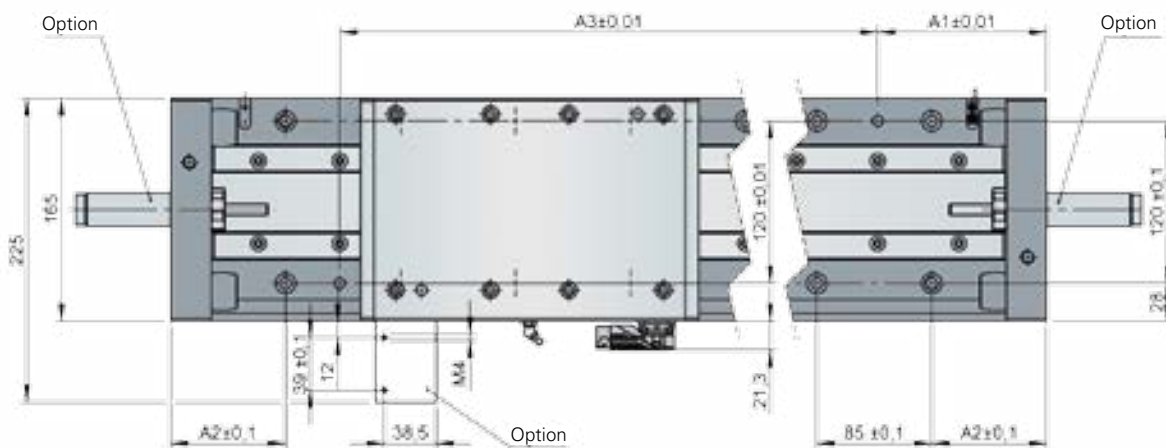
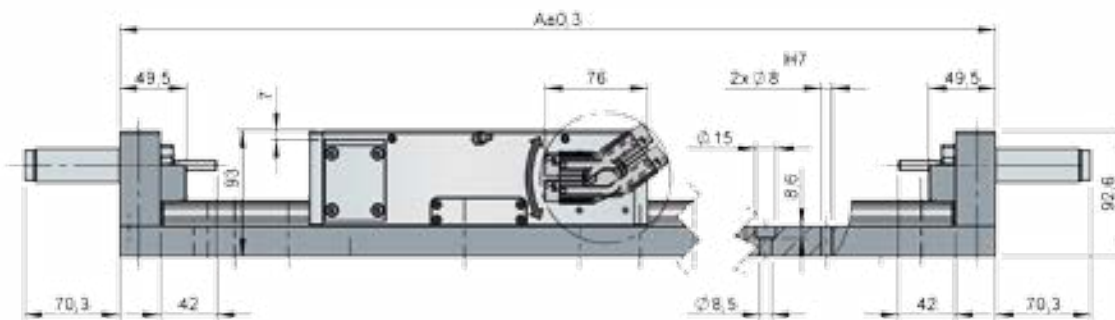
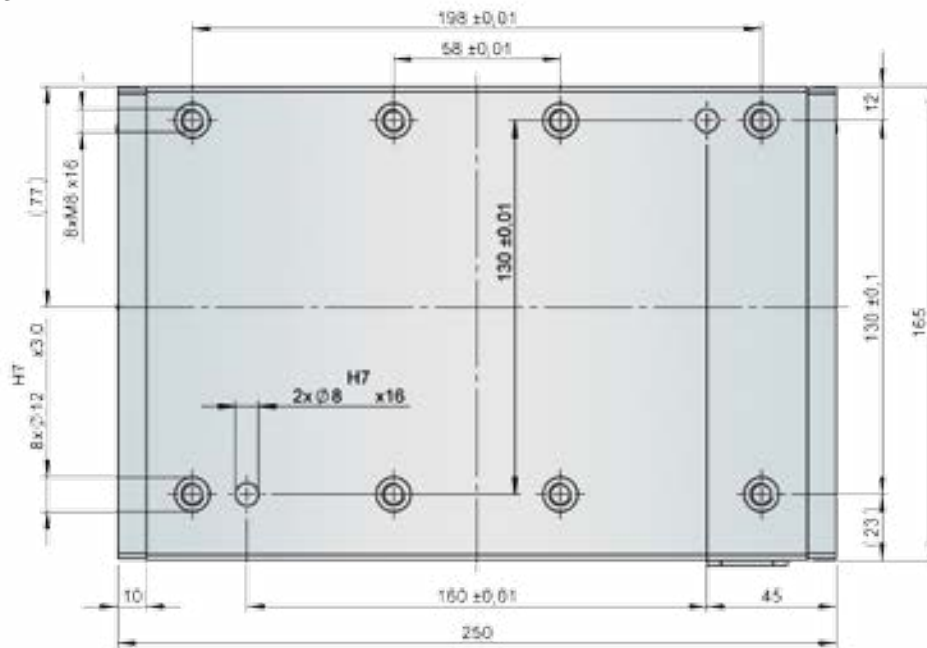
LOAD DATA



TIMING DIAGRAM



DIMENSIONS



Standard strokes (Examples)	A	A1	A2	A3
500	850	125	85	600
1000	1350	125	80	1100

Strokes larger than 1000 mm and intermediate strokes in 100 mm increments available on request

HN 400

TECHNICAL DATA

U	Voltage range:	200-600 V _{AC} Effektiv
a_{Max}	Max. acceleration:	40 m/s ²
v_{Max}	Max. speed:	4 m/s
F_{N mot}	Nominal force:	500 N
F_{P mot}	Peak force:	1400 N
I_P	Peak current:	18 A
s_{Max}	Max. stroke:	bis 1000 mm in 100 mm; > 1000 mm auf Anfrage
	Repeat accuracy:	0.005 mm
m_{rec}	Max. recommended load:	100 kg
m_{gui 0}	Mass of the guide rail with 0 mm stroke:	15.11 kg (Alu)
m_{gui 100}	Mass of the guide rail per 100 mm stroke:	2.9 kg (Alu)
m_{carr}	Mass of the brake:	13.4 kg (Alu)

LOAD DATA (static)

M_{X stat}	Max. static moment about the X-axis:	1000 Nm
M_{Y stat}	Max. static moment about the Y-axis:	500 Nm
M_{Z stat}	Max. static moment about the Z-axis:	1000 Nm
F_{X stat}	Max. static force in the Y-axis:	1000 N
F_{Z stat}	Max. static force in the Z-axis:	1500 N

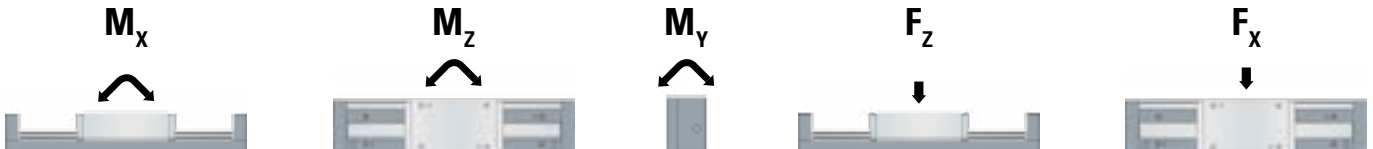
LOAD DATA (dynamic)

M_{X dyn}	Max. dynamic moment about the X-axis:	140 Nm
M_{Y dyn}	Max. dynamic moment about the Y-axis:	60 Nm
M_{Z dyn}	Max. dynamic moment about the Z-axis:	140 Nm
F_{X dyn}	Max. dynamic force in the X-axis:	500 N
F_{Z dyn}	Max. dynamic force in the Z-axis:	1000 N

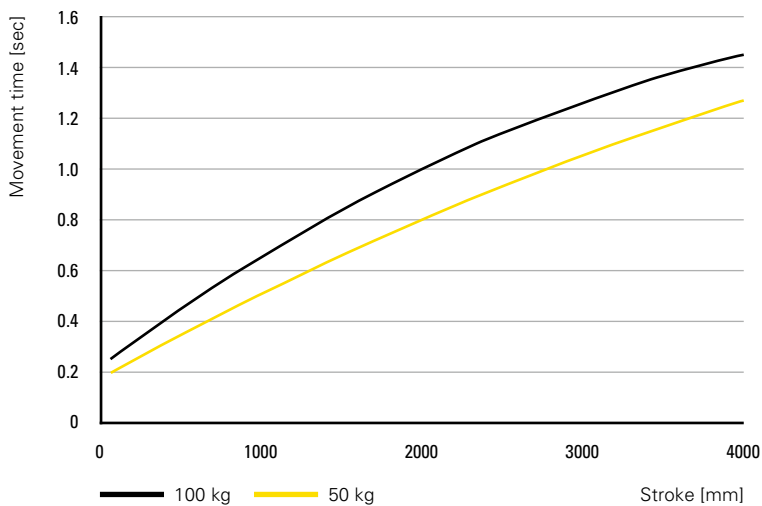
ENCODER

Balluff	sin/cos
Balluff	BISS
Balluff	SSI

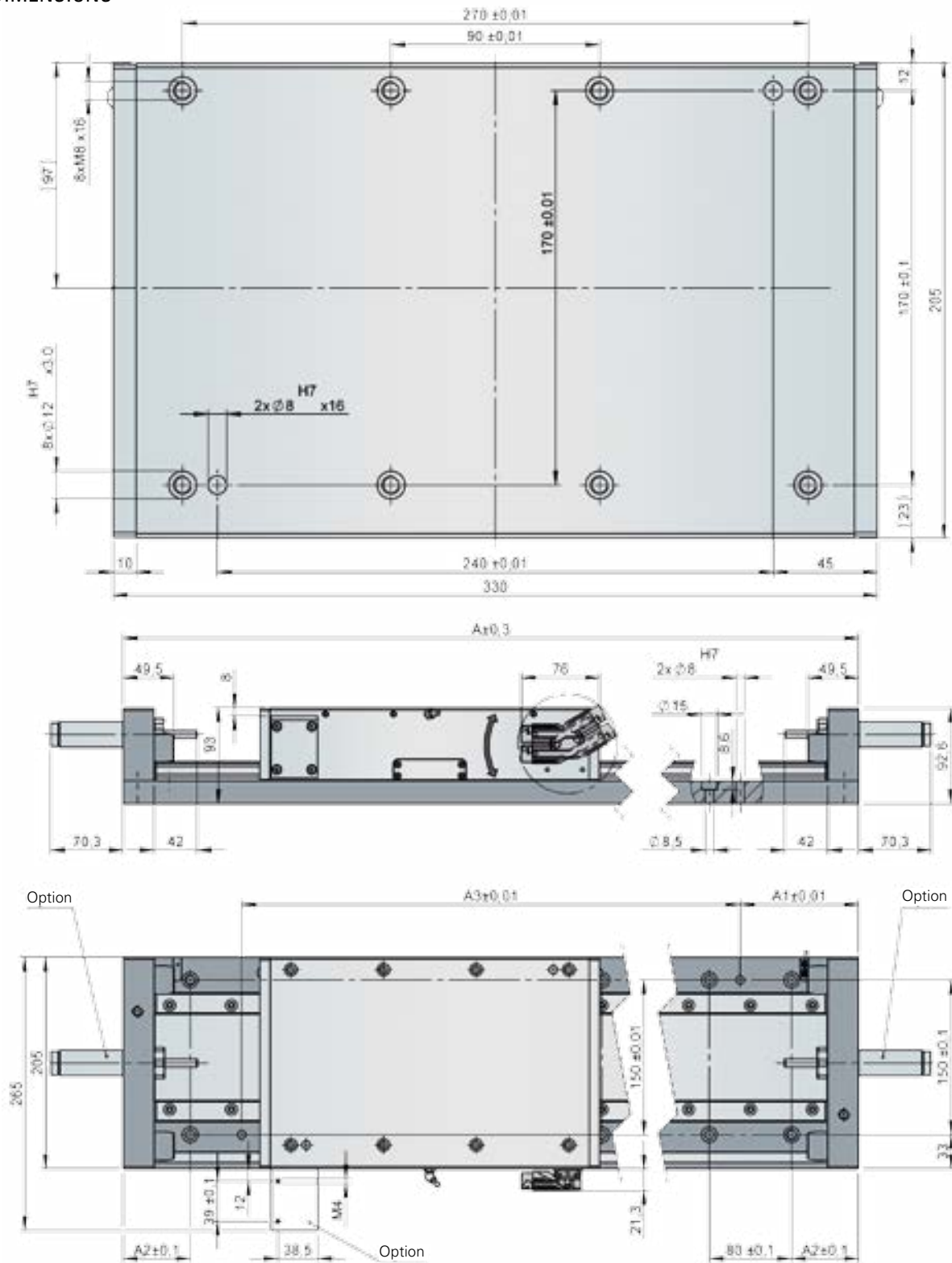
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TIMING DIAGRAM



DIMENSIONS



Standard strokes (Examples)	A	A1	A2	A3
500	930	115	65	700
1000	1430	115	75	1200

Strokes larger than 1000 mm and intermediate strokes in 100 mm increments available on request