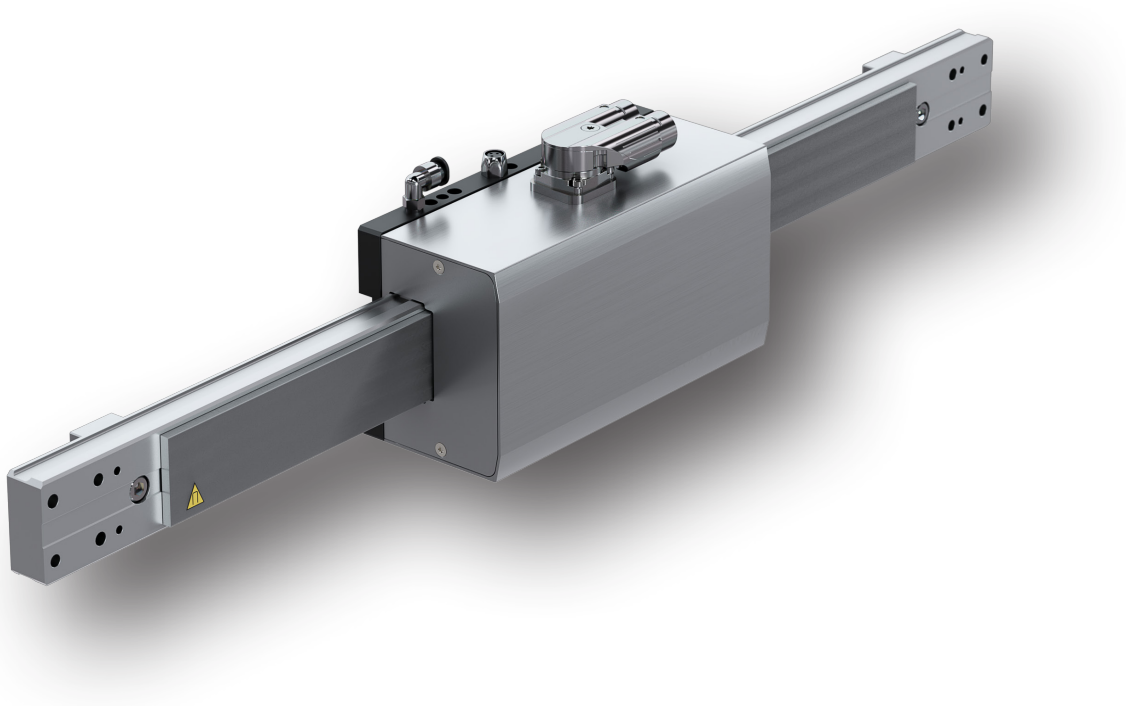
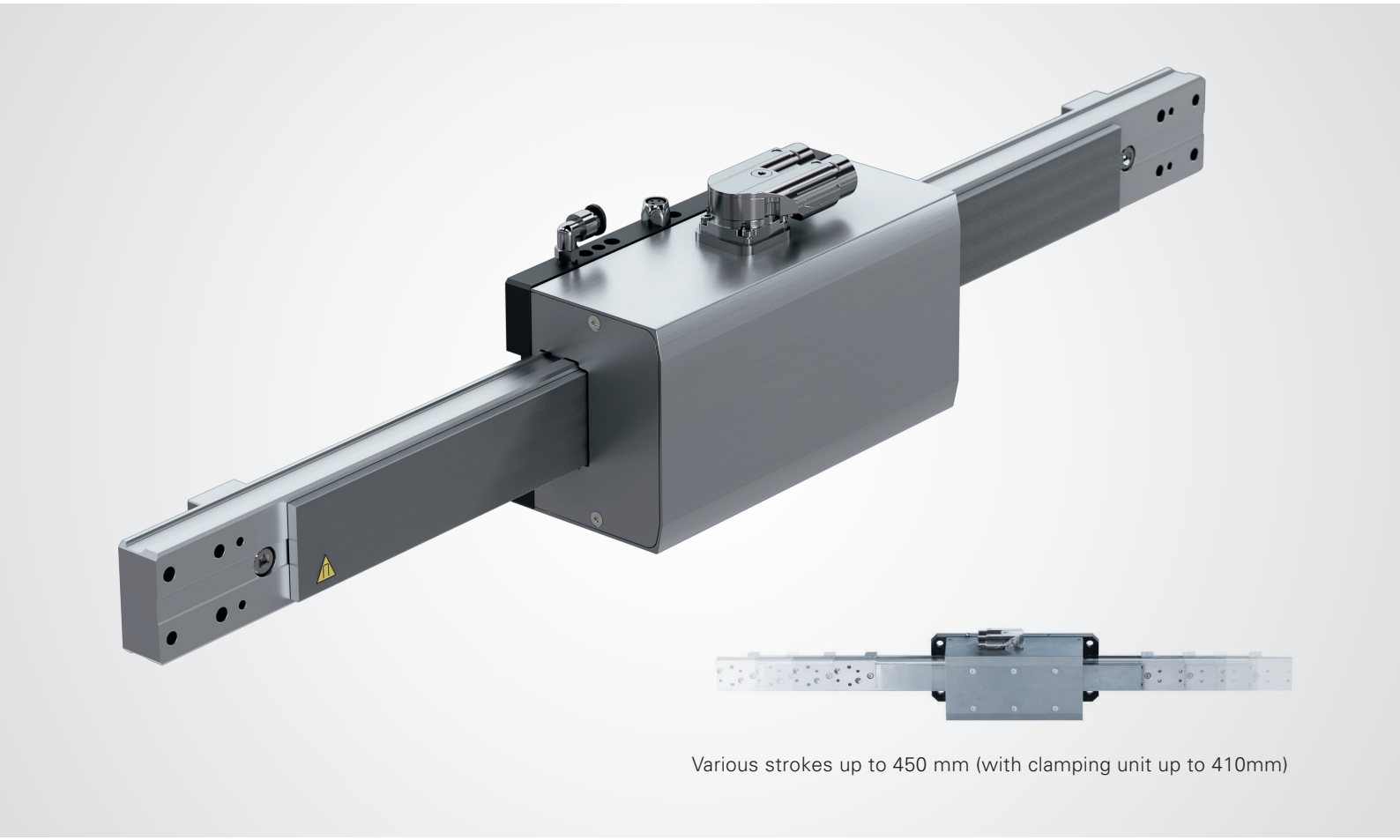
LINEAR MOTOR AXES HL





Various strokes up to 450 mm (with clamping unit up to 410mm)

THE HIGHLY DYNAMIC LINEAR MOTOR AXIS HL

CERTIFICATION AS UL RECOGNIZED COMPONENT

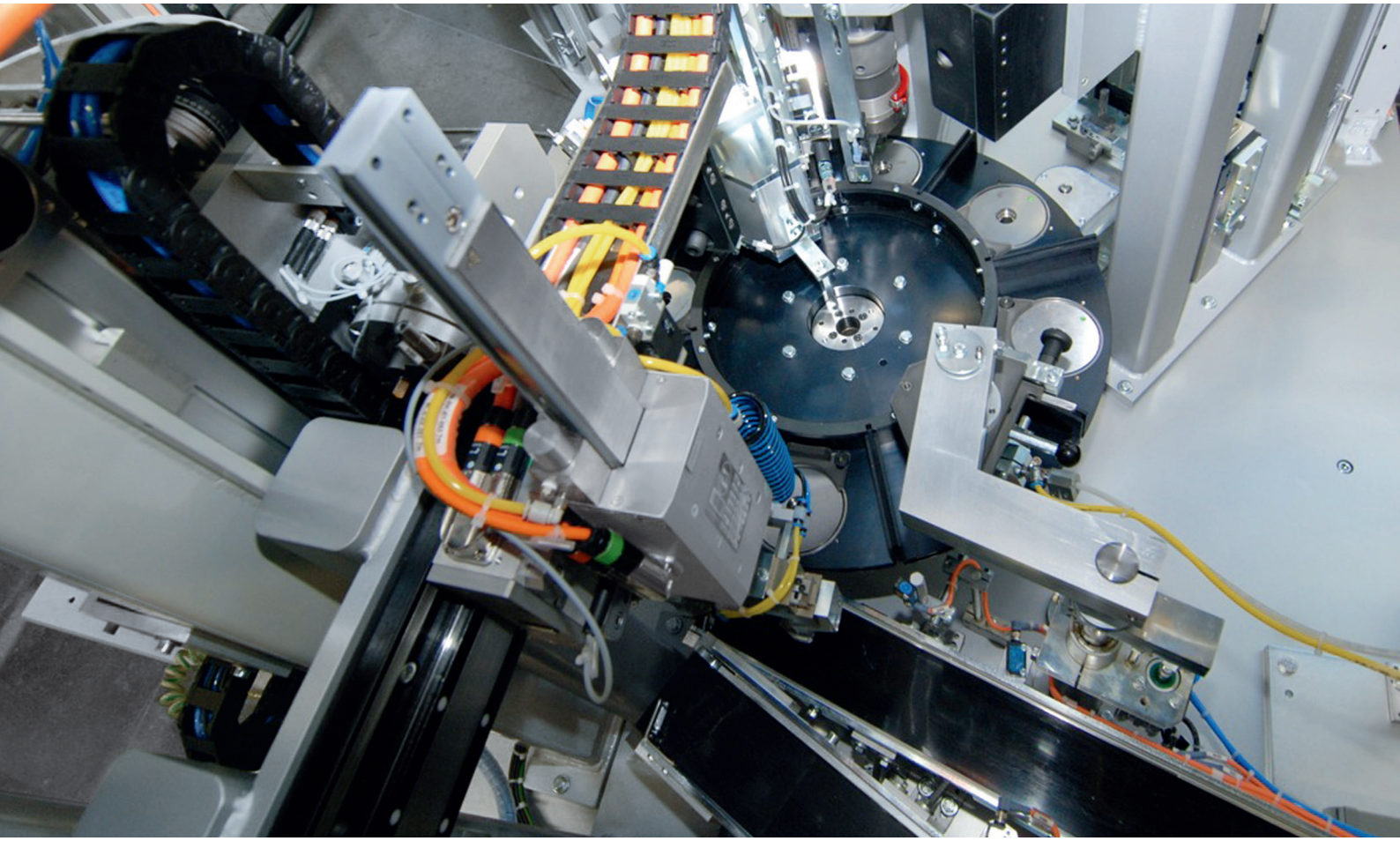
The WEISS linear axes are optionally available in the "**UL Recognized"** available.

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 linear motor axis HL provides, without any doubt, the most modern drive technology which is highly integrated and ready to mount. Tight and precise recirculating ball bearings and an absolute measurement system as well as the automatic lubrication are all included in this product. The result: Rapid and harmonic movements, horizontal or vertical mounting and loading on the right or left side is possible.

ADVANTAGES

- User programmable
- Extremely high dynamic performance thanks to direct drive
- Long lifetime
- Low maintenance costs
- Low energy costs
- Compact design – low weight
- Stiff mechanical assembling
- Very good repeat accuracy

GENERAL INFORMATION

- The moving guide rail moves as little mass as possible. Thus, the HL-axes meet the requirements of vertical applications highly efficiently.
- Standard with functional safety (safe encoder mounting)
- All motors have overtemperature protection (PTC)
- Standard with clamping unit
- The installation position of the HL axes can be selected as desired
- Mounting side can be freely selected

OPTIONS

- Absolute measuring systems
- The linear axes can be equipped with manual or automatic lubrication
- Variant "UL Recognized"

HL 50A

TECHNICAL DATA

U	Voltage range:	200-480 $V_{AC\ rms}$
$U_{Prüf}$	Test bench:	800 V_{AC}
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_N	Nominal current:	2.4 A
I_P	Peak current:	6 A
s_{Max}	Max. stroke (without clamping unit):	150-300 mm
s_{red}	Reduced stroke with brake:	50 mm
	Repeat accuracy:	0.005 mm*
m_{rec}	Max. recommended load:	4 kg
$m_{gui\ 0}$	Mass of the guide rail with 0 mm stroke:	0.7 kg
$m_{gui\ 100}$	Mass of the guide rail per 100 mm stroke:	0.3 kg
m_{carr}	Mass of the carriage with motor:	2.1 kg
$m_{carr\ Fl}$	Mass of the carriage with motor and flange:	2.2 kg
m_{br}	Mass of the clamping unit:	0.4 kg
F_{Br}	Clamping unit force:	145 N
p_{Br}	Opening pressure:	4 bar

* Depends on the application and environmental conditions.

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:	300 N
$F_{X\ stat}$	Max. static force in the Y-axis:	500 N
$F_{Z\ stat}$	Max. static force in the Z-axis:	200 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:	30 Nm
$F_{X\ dyn}$	Max. dynamic force in the X-axis:	90 N
$F_{Z\ dyn}$	Max. dynamic force in the Z-axis:	60 N

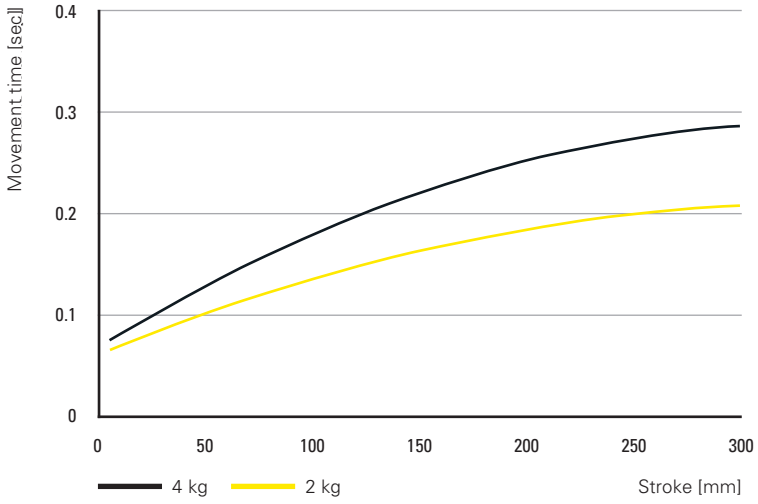
ENCODER

Balluff	sin/cos
Balluff	BISS
Balluff	SSI

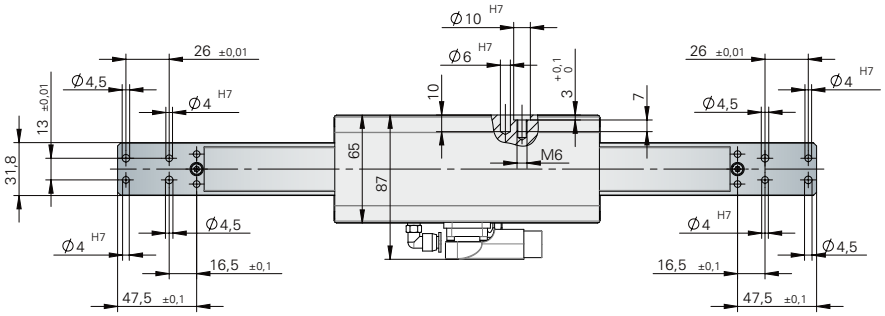
LOAD DATA

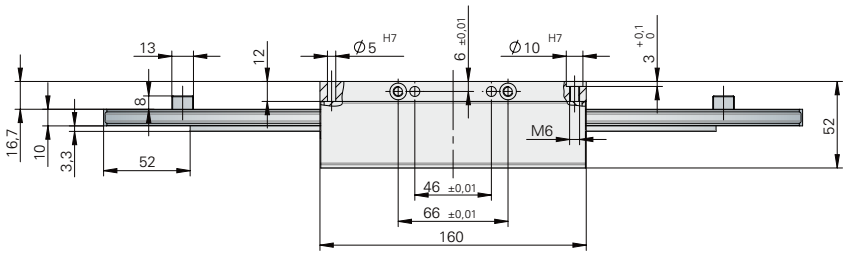


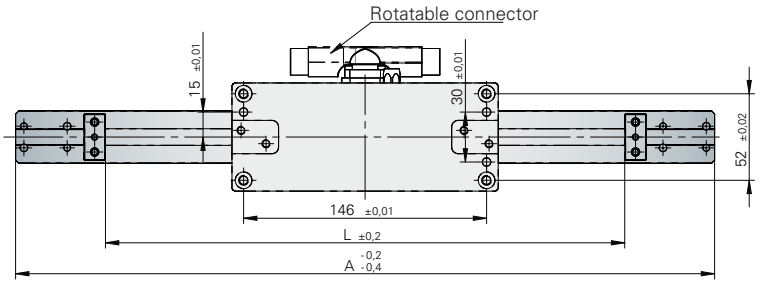
TIMING DIAGRAM

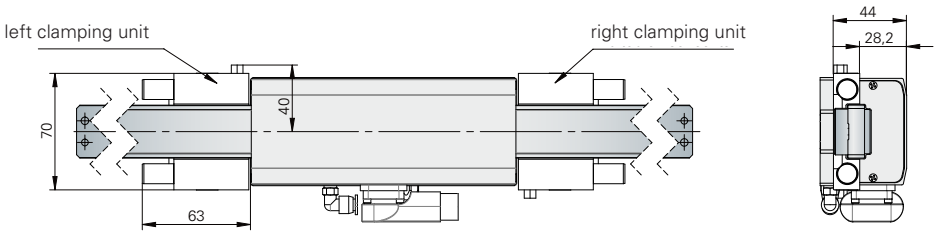


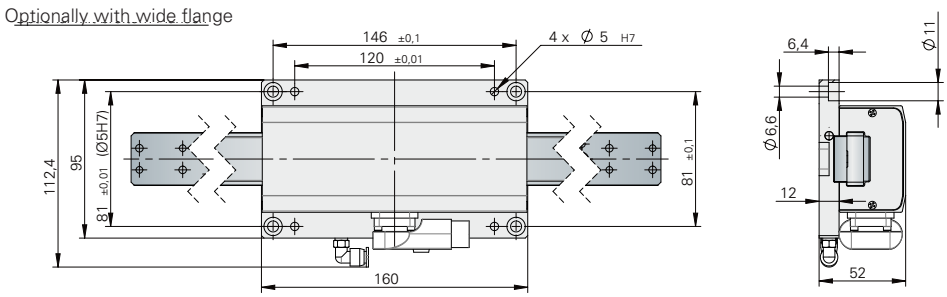
DIMENSIONS











Stroke with 1 camping unit in mm	Stroke without clamping unit in mm	Dimension L in mm	Dimension A in mm
100	150	312	420
150	200	361	469
200	250	410	518
250	300	462	570

STANDARD FEATURES: SAFE ENCODER MOUNTING, MOUNTING PLATE MADE OF NATURAL ANODIZED ALUMINUM, LUBRICATION CONNECTION FOR MANUAL LUBRICATION MOUNTED, PLUG-IN CONNECTION FOR AUTOMATIC LUBRICATION AND CENTERING SLEEVES ENCLOSED

Attribute	Value	HL50	150	SSI20B	WCLL	BA
Type	HL50					
Stroke in mm	Depending on the selection clamping 100 (only WCLx) 150 200 250 300 (only NCL)					
Encoder	SICO1 = magnetic, incremental SSI20B = magnetic, absolute SSI 20Bit (Bosch) BISS20 = magnetic, absolute BiSS20Bit (B&R)					
Clamping	NCL = without clamping unit WCLL = left clamping unit WCLR = right clamping unit					
Mounting plate	BA = small flange plate FA = wide flange plate					

HL 100A

TECHNICAL DATA

U	Voltage range:	200-480 $V_{AC\ rms}$
$U_{Prüf}$	Test bench:	800 V_{AC}
a_{Max}	Max. acceleration:	40 m/s²
v_{Max}	Max. speed:	4 m/s *
$F_{N\ mot}$	Nominal force:	150 N
$F_{P\ mot}$	Peak force:	380 N
I_N	Nominal current:	3.6 A
I_P	Peak current:	9.5 A
s_{Max}	Max. stroke without clamping unit:	150-500 mm
s_{red}	Reduced stroke with brake:	40 mm
	Repeat accuracy:	0.005 mm**
m_{rec}	Max. recommended load:	8 kg
$m_{gui\ 0}$	Mass of the guide rail with 0 mm stroke:	1.8 kg
$m_{gui\ 100}$	Mass of the guide rail per 100 mm stroke:	0.6 kg
m_{carr}	Mass of the carriage with motor:	3.6 kg
$m_{carr\ Fl}$	Mass of the carriage with motor and flange:	4 kg
m_{br}	Mass of the clamping unit:	0.5 kg
F_{Br}	Clamping force:	350 N
p_{Br}	Opening pressure:	6 bar

*In combination with W.A.S. 2 compact the maximum speed is 3 m/s.
** Depends on the application and environmental conditions.

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:	500 Nm
$F_{X\ stat}$	Max. static force in the Y-axis:	800 N
$F_{Z\ stat}$	Max. static force in the Z-axis:	400 N

LOAD DATA (dynamic)

$M_{X\ dyn}$	Max. dynamic moment about the X-axis:	35 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:	100 N

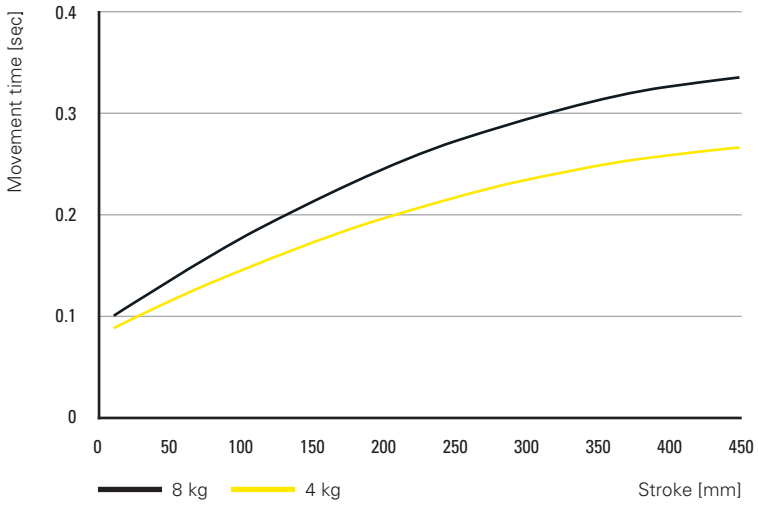
ENCODER

Balluff	sin/cos
Balluff	BISS
Balluff	SSI

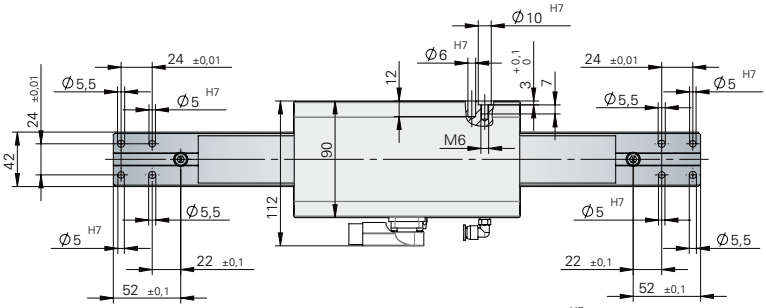
LOAD DATA

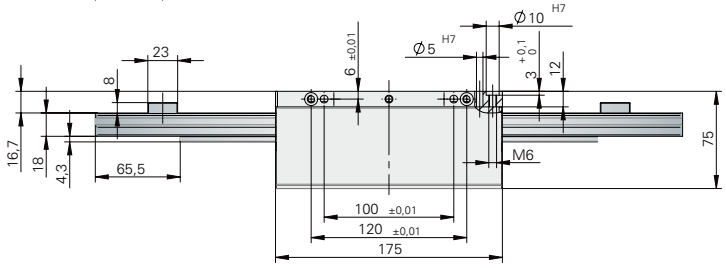


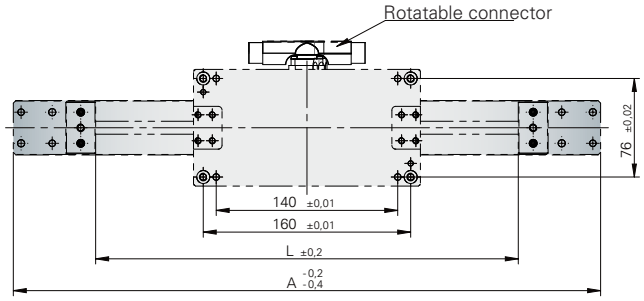
TIMING DIAGRAM

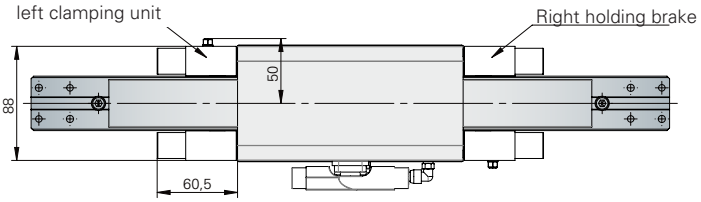


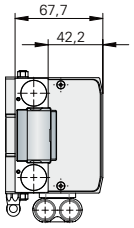
DIMENSIONS



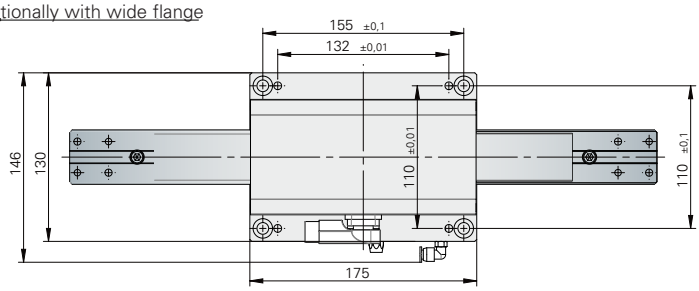


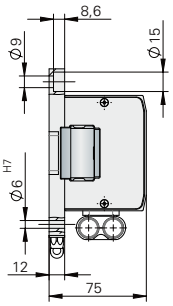






Optionally with wide flange





Stroke with 1 camping unit in mm	Stroke without clamping unit in mm	Dimension L in mm	Dimension A in mm
110	150	326	453
150	190	365.5	492.5
190	230	405	532
260	230	476	603
300	340	515.5	642.5
340	380	555	682
410	450	626	753

STANDARD FEATURES: SAFE ENCODER MOUNTING, MOUNTING PLATE MADE OF NATURAL ANODIZED ALUMINUM, LUBRICATION CONNECTION FOR MANUAL LUBRICATION MOUNTED, PLUG-IN CONNECTION FOR AUTOMATIC LUBRICATION AND CENTERING SLEEVES ENCLOSED

Attribute	Value	HL100	150	SSI20B	WCLL	BA
Type	HL100					
Stroke in mm	Depending on the selection clamping 110 (only WCLx) 150 190 230 (only NCL) 260 (only WCLx) 300 340 380 (only NCL) 410 (only WCLx) 450 (only NCL)					
Encoder	SICO1 = magnetic, incremental SSI20B = magnetic, absolute SSI 20Bit (Bosch) BISS20 = magnetic, absolute BiSS20Bit (B&R)					
Clamping	NCL = without clamping unit WCLL = left clamping unit WCLR = right clamping unit					
Mounting plate	BA = small flange plate FA = wide flange plate					

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WEISS GMBH

Siemensstrasse 17 74722 Buchen Germany
Phone +49 6281 5208-0 Fax +49 6281 5208-99
info@weiss-world.com
www.weiss-world.com

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