Various strokes up to 450 mm

THE HIGHLY DYNAMIC LINEAR MOTOR AXIS HL

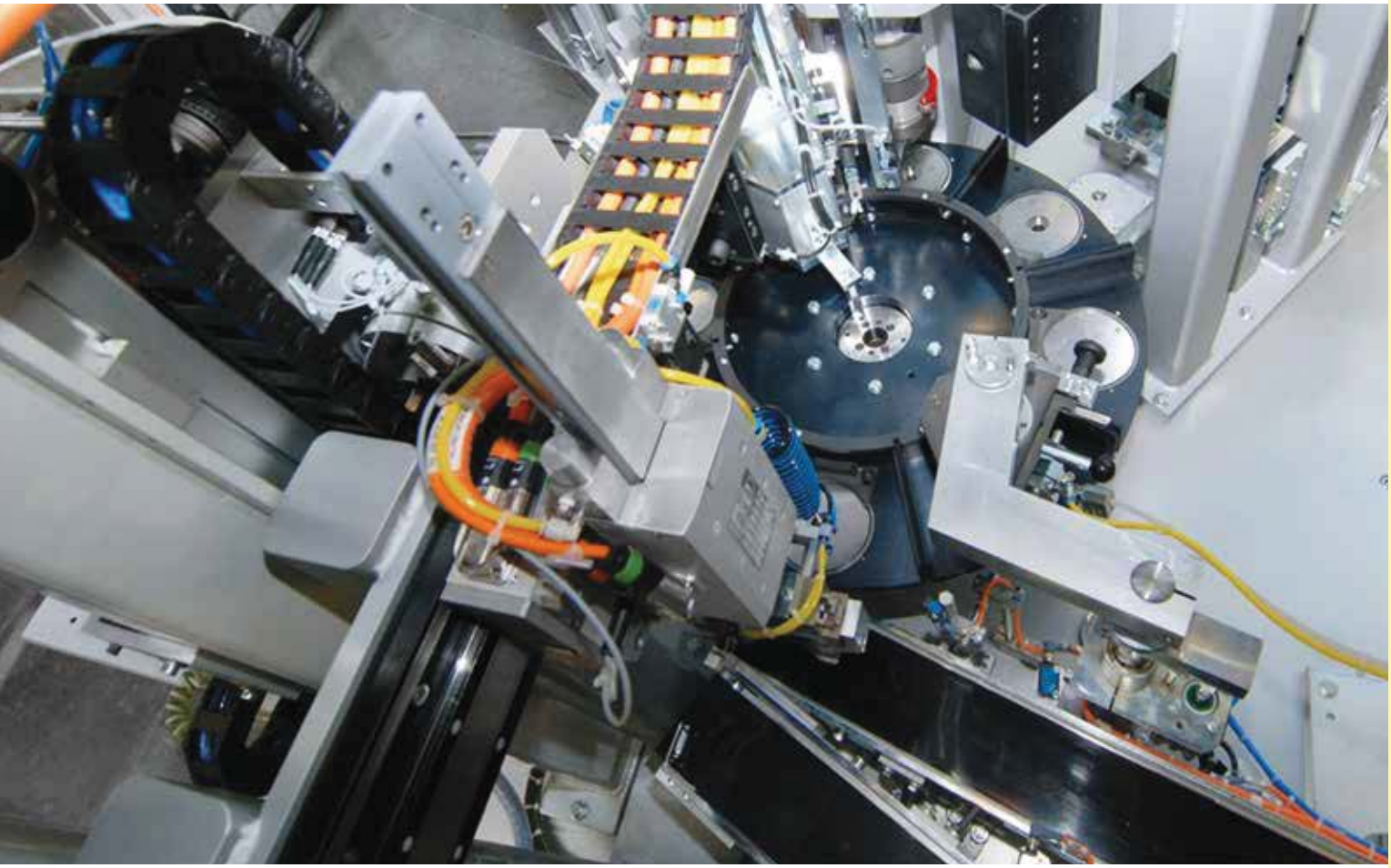
OPTIONS AVAILABLE

- Tool connector; electrical and pneumatic supply is accessible
- Automatic grease pump for applications without maintenance

WEISS APPLICATION SOFTWARE

Fast, easy and secure setting through its unique 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
- Extreme dynamics
- Monitored movements
- Long lifetime
- No maintenance cost
- Hygienic linear drive/no pneumatics
- Low energy costs
- Compact architecture
- Stiff mechanical assembling
- No oil / No gear
- Various sizes and shapes available
- Absolute encoder
- Light weight
- High power density
- No wearing parts

HL 50

TECHNICAL DATA

Nom. force (N):	65
Peak force (N):	180
Max. speed (m/s):	4
Max. acceleration (m/s²):	40
Nom. current (Arms):	2.4
Peak current (Arms):	6.0
Max. load capacity (kg):	6
Max. DC voltage (VDC):	800

Weight	Steel base	Alu base
of rail, 0 stroke (kg):	0.7	0.7
of rail/100mm (kg):	0.3	0.3
of narrow motor (kg):	2.5	2.1
of wide motor (kg):	2.9	2.2
of brake (kg/piece):	0.4	0.4

System accuracy (µm/m):	10 incremental (Sin/Cos 1 Vpp)
System accuracy (µm/m):	5 absolute (BISS/C, SSI) optional
Repeatability (µm):	5 incremental (Sin/Cos 1 Vpp)
Repeatability (µm):	2 absolute (BISS/C, SSI) optional
Brake force per unit (N):	200
Available strokes (mm):	150, 300
Thermal sensor:	PTC

STATIC LOAD

200 Nm

300 Nm

50 Nm

200 N

500 N

DYNAMIC LOAD

20 Nm

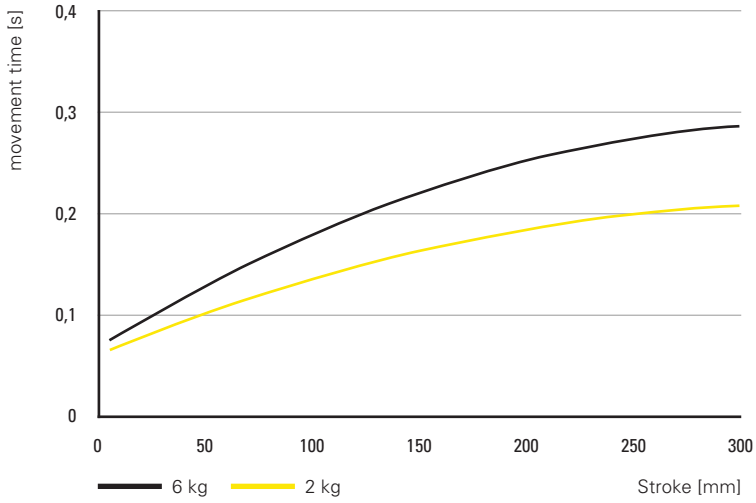
30 Nm

10 Nm

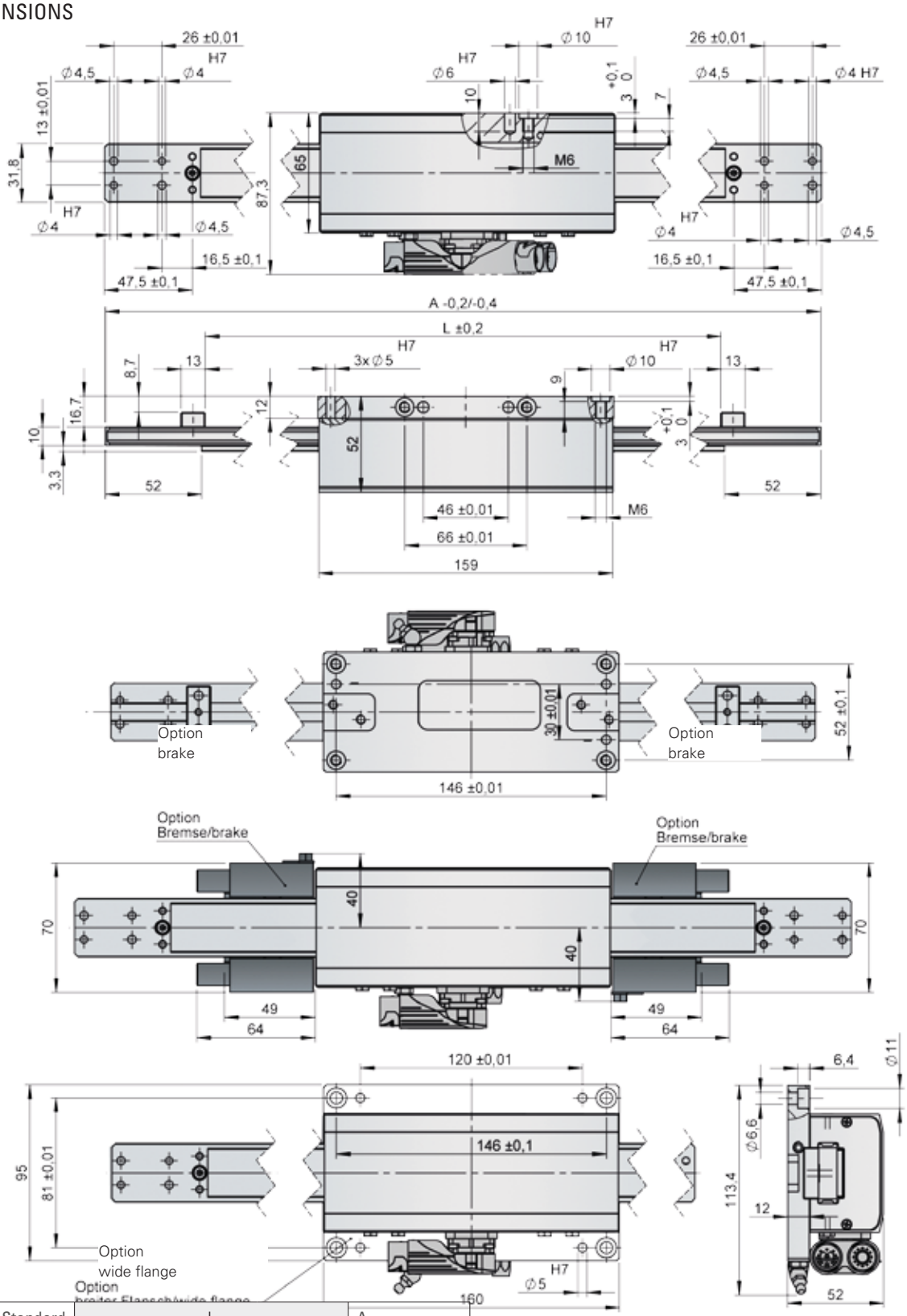
60 N

90 N

TIMING DIAGRAM



DIMENSIONS



Standard strokes	L			A
	Number of brakes			
	0	1	2	
150	325	365	405	L+129
300	475	515	555	L+129
450	625	665	705	L+129

HL 100

TECHNICAL DATA

Nom. force (N):	150
Peak force (N):	380
Max. speed (m/s):	4
Max. acceleration (m/s²):	40
Nom. current (Arms):	3.6
Peak current (Arms):	9.5
Max. load capacity (kg):	10
Max. DC voltage (VDC):	800

Weight	Steel base	Alu base
of rail, 0 stroke (kg):	1.8	1.8
of rail/100 mm (kg):	0.3	0.3
of narrow motor (kg):	4.4	3.6
of wide motor (kg):	5.1	4
of brake (kg/piece):	0.5	0.5

System accuracy (µm/m):	10 incremental (Sin/Cos 1 Vpp)
System accuracy (µm/m):	5 absolute (BISS/C, SSI) optional
Repeatability (µm):	5 incremental (Sin/Cos 1 Vpp)
Repeatability (µm):	2 absolute (BISS/C, SSI) optional
Brake force per unit (N):	200
Available strokes (mm):	150, 300, 450
Thermal sensor:	PTC

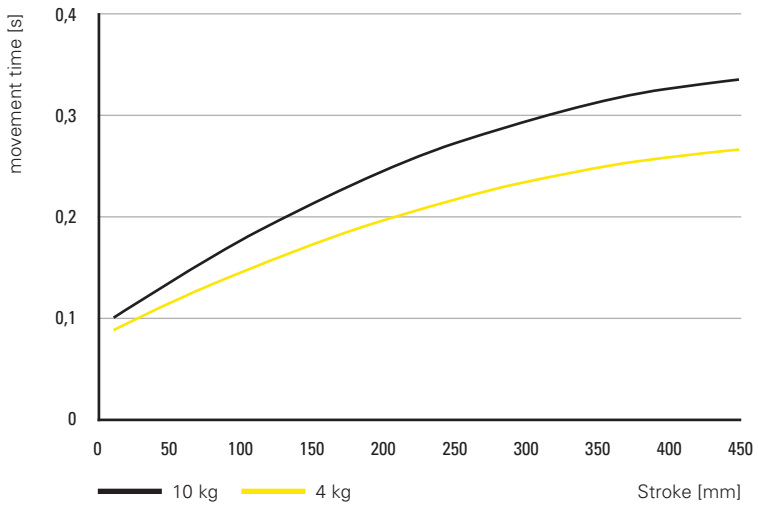
STATIC LOAD

350 Nm | **500 Nm** | **100 Nm** | **400 N** | **800 N**

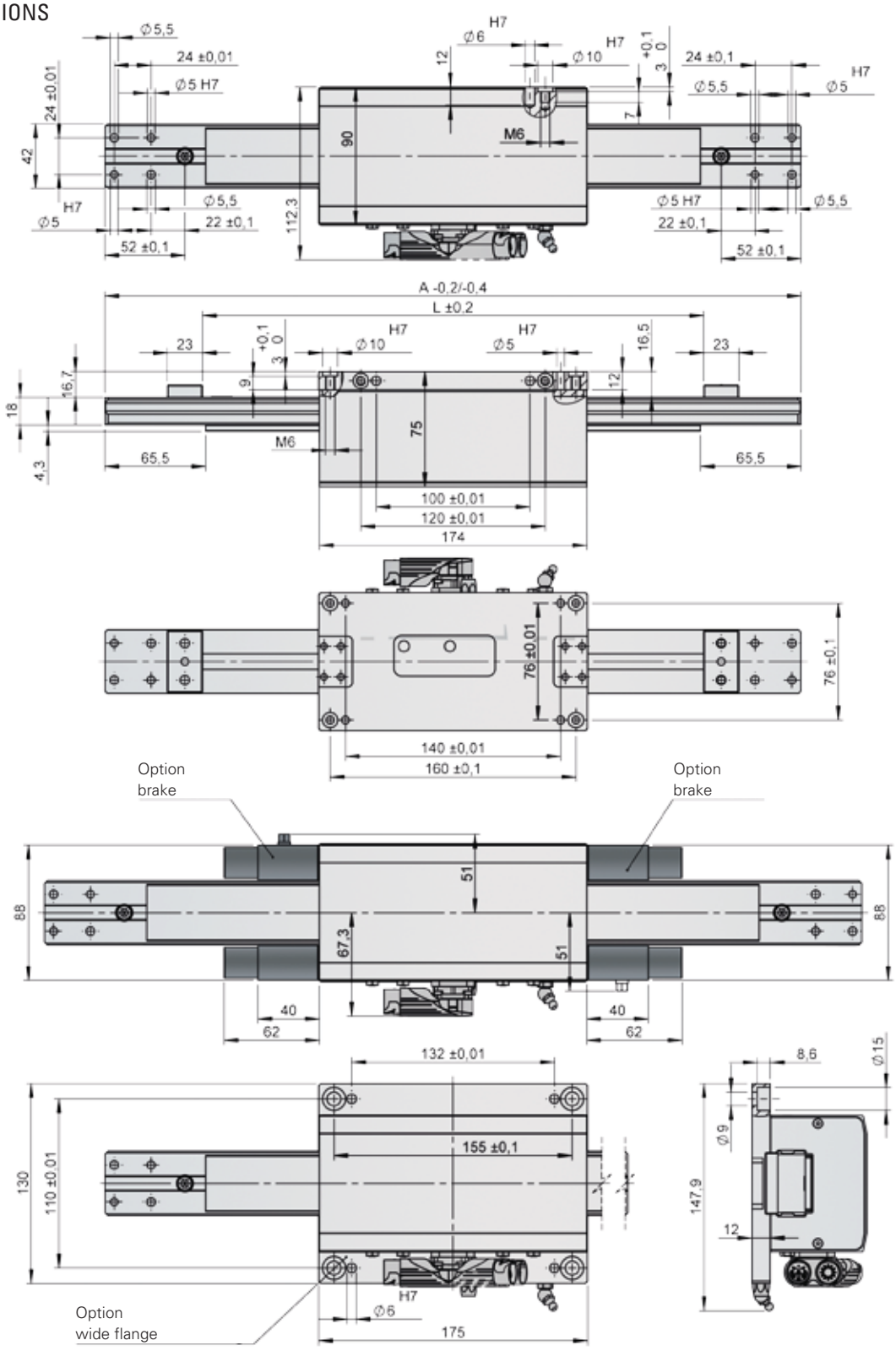
DYNAMIC LOAD

35 Nm | **40 Nm** | **15 Nm** | **100 N** | **150 N**

TIMING DIAGRAM



DIMENSIONS



Standard strokes	L			A
	Number of brakes			
	0	1	2	
150	325	365	405	L+129
300	475	515	555	L+129
450	625	665	705	L+129

W.A.S./W.A.S. 2

WEISS APPLICATION SOFTWARE

With its basic functionality for commissioning individual axes, the W.A.S. (WEISS Application Software) allows fast commissioning of all multi-axis systems. Simply connect your Windows PC via Ethernet to set the control parameters.

- All positions and speeds are freely programmable
- Free language selection
- Easy access to axis parameters
- Diagnostic options, remote maintenance
- Inputs and outputs can be forced (e.g. for start-up)
- Software cams can be specified
- Error history

COMMUNICATION

- Digital I/O (24V inputs and outputs)
- Profibus-DP
- EtherNet/IP (Rockwell)
- PROFINET (W.A.S. 2 only)
- EtherCAT (W.A.S. 2 only)
- More available on request

DESIGN AND CONNECTION

- Plug & play
- Pre-parameterised control package
- Perfectly matched components
- Outstanding flexibility with regard to cable length and interfaces

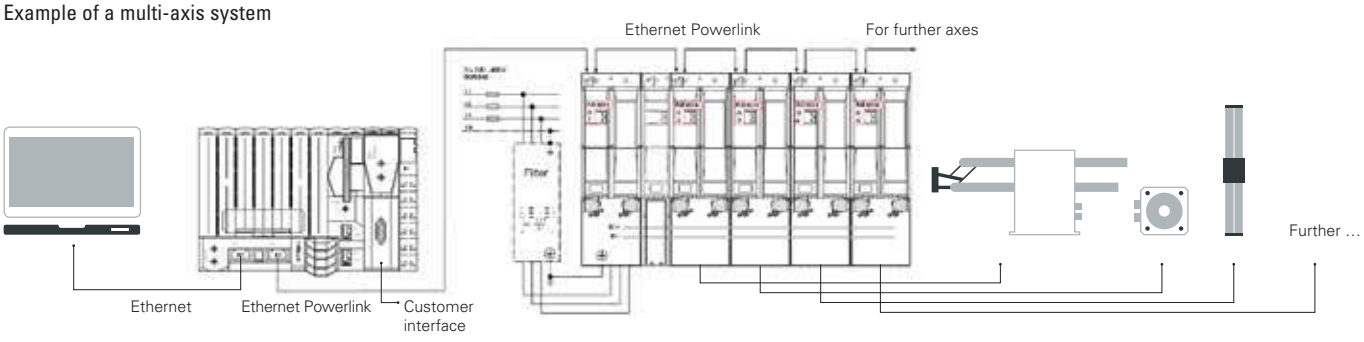
SAFETY AND SERVICE

- Safe Torque Off
- Safe Motion on request
- Worldwide service / complete UL approval
- Comprehensive safety and monitoring functions

Electrical data	HL 50	HL 50	HL 100	HL 100
Main power voltage	**230 V**	**400 V**	**230 V***	**400 V**
24 V power voltage	1.2 A	1.2 A	1.2 A	1.42 A
Connection power	**0.92 kVA**	**1.54 kVA**	**0.92 kVA**	**3.5 KVA**
Installation dimensions W x H x D **	60 x 257 x 300 mm	60 x 275 x 300 mm	60 x 257 x 300 mm	70 x 275 x 300 mm

* Reduced power ** Installation dimensions of the most compact version, depends on supply voltage and controller manufacturer

Example of a multi-axis system



MACHINE DESIGN HANDLING UNIT

Fax to: +49 (0) 6281 5208-99 or just fill in the form online: www.weiss-international.com

☐ Enquiry ☐ Attachment to order

Dear customer,
Thank you for your interest in our handling units. To ensure optimum design of the system for your specific requirements, please answer the following questions:

Single axis

Number of HN axes: _____

Stroke: _____ mm

Number of HG axes: _____

Stroke: _____ mm

Number of HL axes: _____

Stroke: _____ mm

☐ Without brake (hor.)
☐ Brake (vertical)
☐ 2 brakes (vertical)

Axis system

No. of HP handling units: _____

Y-Stroke: _____ mm
Z-Stroke: _____ mm

No. of linear gantries: _____

Y-Stroke: _____ mm
Z-Stroke: _____ mm

No. of cross-tables: _____

Y-Stroke: _____ mm
Z-Stroke: _____ mm

No. of 3-axis handling units: _____

X-Stroke: _____ mm
Y-Stroke: _____ mm
Z-Stroke: _____ mm

No. of gantry handling units: _____

X-Stroke: _____ mm
Y-Stroke: _____ mm
Z-Stroke: _____ mm

No. of 3-axis handling units: _____

X-Stroke: _____ mm
Y-Stroke: _____ mm
Z-Stroke: _____ mm

Cycle calculation

Payload: ____ (kg)

	Axis				Stroke	Time
	X	Y	U	A*		
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

* A = Rotary axis

Accessories

Measuring system ☐ incremental ☐ absolute (up to 1000 mm stroke)
Lubrication ☐ automatic ☐ manual

Electrical components

☐

Amplifier, W.A.S. software
Cable lengths: ☐ 5 m ☐ 10 m ☐ 15 m ☐ 20 m ☐ 25 m

Interface to customer PLC

☐ Profibus-DP
☐ Digital I/O
☐ PROFINET (W.A.S. 2 only)
☐ EtherCAT (W.A.S. 2 only)
☐ Ethernet/IP (Rockwell)
☐ _____

Accessories for the HP

☐ 1 pneumatic valve ☐ 2 pneumatic valves
☐ Tool connector ☐ with brake (HP 70)

Supply voltage

☐ 1 or 3 x 208 ... 230 V ~ 50/60 Hz
☐ 3 x 400 to 480 V ~ 50/60 Hz (larger installation dimensions)

For technical enquiries

Company: _____
Name: _____
Country: _____

Desired delivery date: _____
Phone: _____ Fax: _____
E-Mail: _____