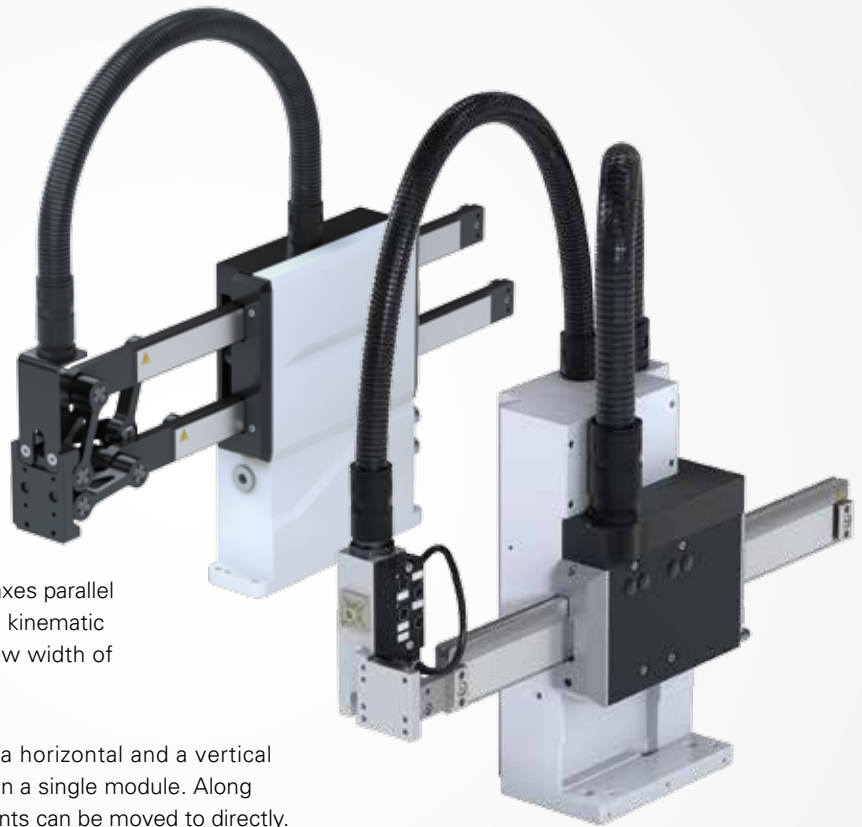Pick & Place HP 70: two horizontal linear axes parallel on top of each other, connected through a kinematic unit. Because of the construction a narrow width of only 60 mm is possible.

Pick & Place HP 140: a horizontal and a vertical linear axis integrated in a single module. Along these two axes all points can be moved to directly.

HP PICK & PLACE:
THE DIRECT ALTERNATIVE

THE SOLUTION FOR CLEANROOMS

The HP 140T CL 6 Pick & Place has been designed for use in cleanrooms and is certified to air purity class 6 in line with ISO 14644-1.
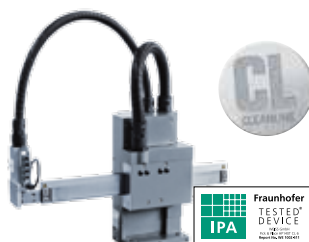
WEISS APPLICATION SOFTWARE

Fast, convenient and secure commissioning using W.A.S. – WEISS Application Software: Simple control system, practical plain text.

w·a·s.handling
WEISS Application Software

Automated assembly system for electromechanical sensors from UBH Mechanical Engineering: eleven direct-drive Pick & Place units achieve positioning accuracy of 0.02 millimetres – at a cycle time of 1.5 seconds.

Whether HP 140 or HP 70: The Pick & Place from WEISS works with two linear axes and therefore profit from all advantages of a direct drive: rapid dynamic performance, free user-programmability, minimal wear and highest precision. The compact modules get reinforcement for place-saving applications with the extra slim HP 70. The HP overcomes limits of traditional pneumatic systems regarding variability, dynamic performance and efficiency.

ADVANTAGES

- Extremely high dynamic performance

- Ready-for-installation, holistic, customer-friendly complete solution (plug & play)

- Free user-programmability for changing tasks/processes

- Permanent feedback of position, process forces, speed (adjustable control circuit)

- Maintenance-free

- Significantly lower energy consumption, in particular in comparison with pneumatic systems

- Very compact and slim design, offering greater flexibility for integration and assembly of the machine

- W.A.S. – WEISS Application Software for simple commissioning

- Impressive price-performance
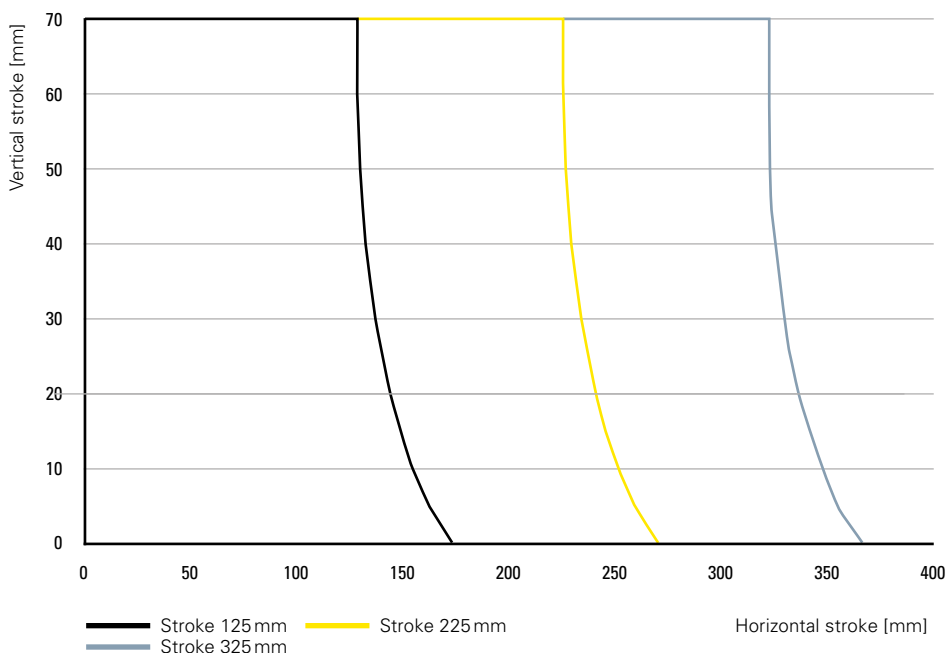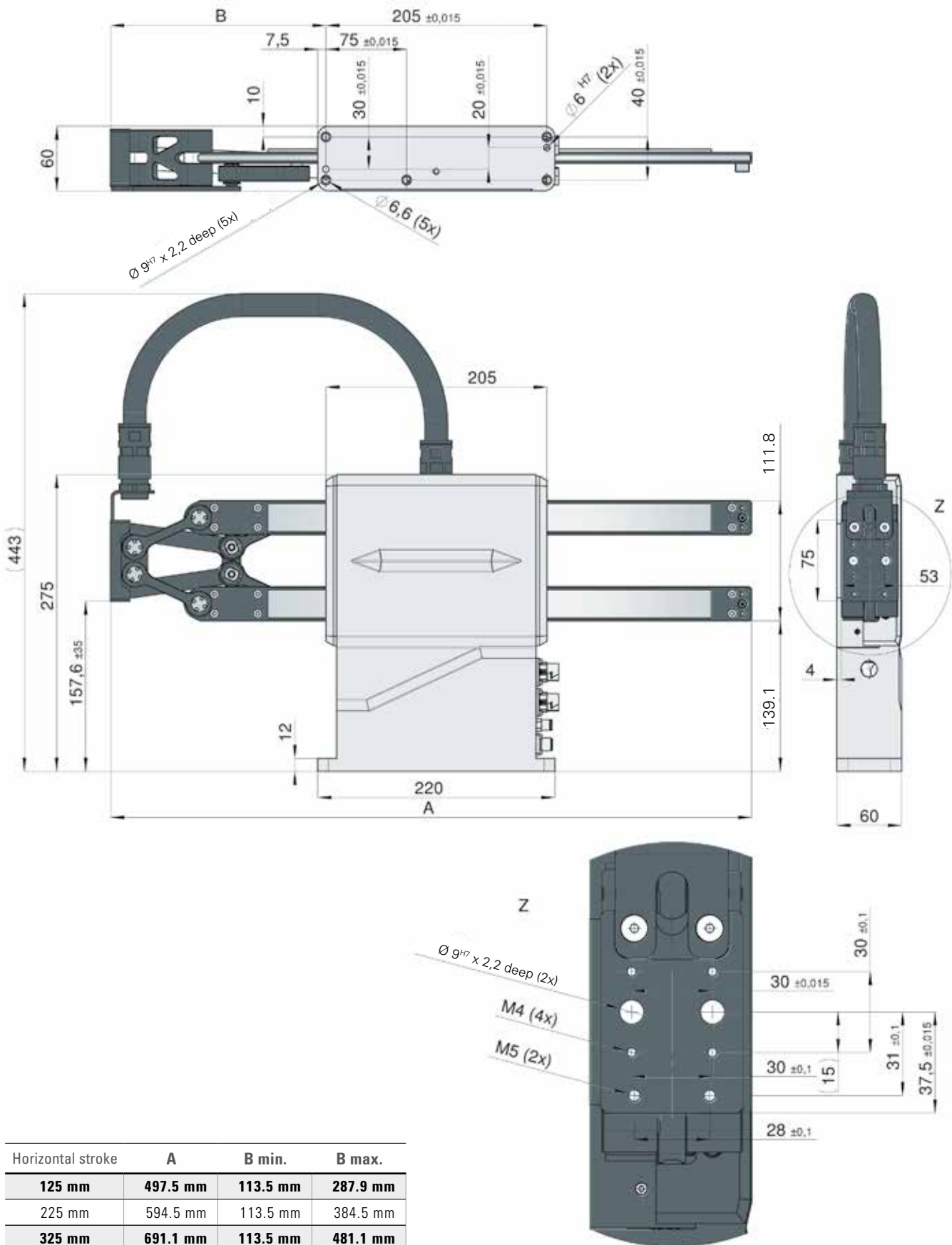
- Overload protection

HP 70T

LOAD DATA

F_Y = 100 N
F_Z = 100 N
M_K = 61 Nm
M_D = 41 Nm
M_Q = 120 Nm
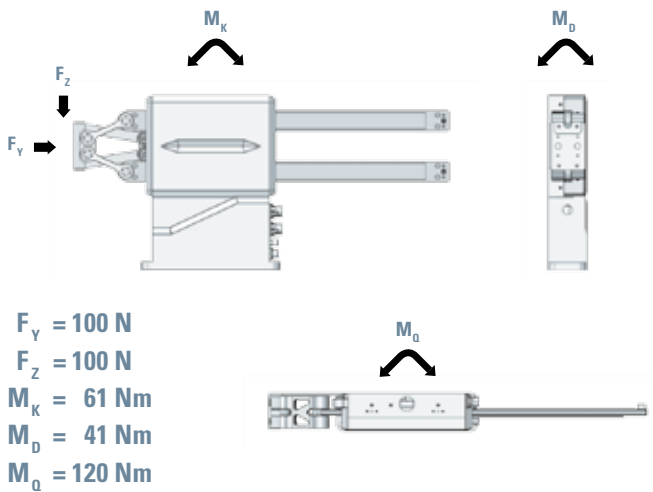
TECHNICAL DATA

Load capacity (kg):	1 kg (higher loading after consulting)
Vertical stroke:	70 mm freely programmable
Horizontal stroke:	125, 225, 325 mm freely programmable (see diagram below)
Positioning accuracy:	0.02 mm
Repeat accuracy:	0.01 mm
Max. acceleration:	40 m/s²
Max. speed:	4 m/s
Nom. force (per motor):	65 N
Peak force (per motor):	180 N
Measuring system:	Sin-Cos 1Vpp, optional absolute
Installation position:	Horizontal (vertical after consulting)
Weight:	Approx. 9 kg

Please do not exceed the given forces – especially during pick or place operations. The accuracy is given for constant temperature and without outside forces.

MECHANICAL STROKE

Vertical stroke [mm] / Horizontal stroke [mm]

—— Stroke 125 mm   —— Stroke 225 mm   Horizontal stroke [mm]
—— Stroke 325 mm

DIMENSIONS

Horizontal stroke	A	B min.	B max.
125 mm	497.5 mm	113.5 mm	287.9 mm
225 mm	594.5 mm	113.5 mm	384.5 mm
325 mm	691.1 mm	113.5 mm	481.1 mm

HP 140T

LOAD DATA

F_Y = 240 N
F_Z = 360 N
M_K = 49 Nm
M_D = 15 Nm
M_Q = 36 Nm

Please do not exceed the given forces – especially during pick or place operations. The accuracy is given for constant temperature and without outside forces.

CYCLE TIMES

Depending on the direction of travel, the complete cycle time can be calculated with the aid of the below example:

EXAMPLE:

|			
Weight of workpiece	**1 kg**	Curved proportion of movement	**10 mm**
Vertical stroke	**40 mm**	Handshake control	**20 ms**
Horizontal stroke	**120 mm**		
Gripper delay time	**50 ms**		

Results for the full cycle from A to B and back:

$t_{ABA} = 4 \times t_{vertical} + 2 \times t_{horizontal} + 2 \times t_{delay\ time} + t_{Handshake}$

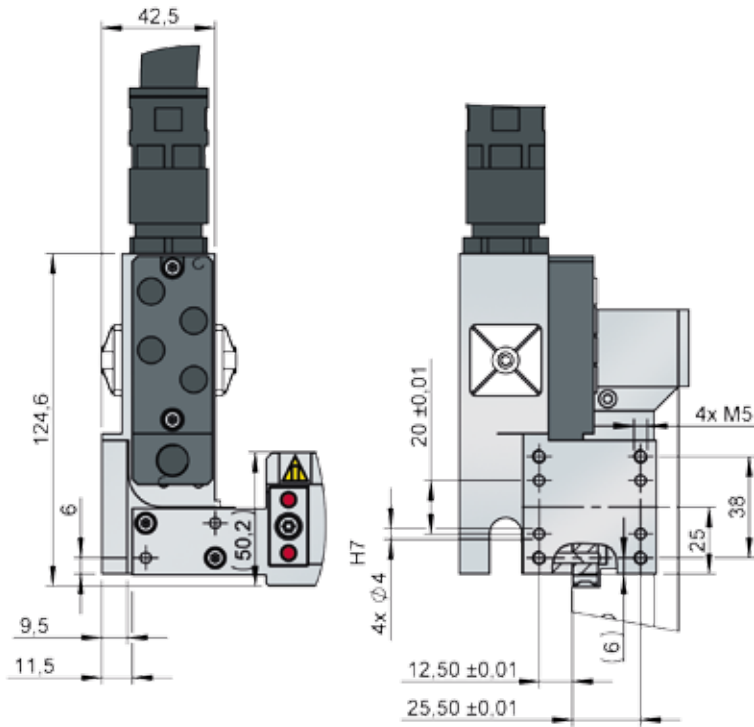$t_{ABA} = 4 \times 80\ ms + 2 \times 100\ ms + 2 \times 50\ ms + 20\ ms$

$t_{ABA} = 0.64\ sec$

TIMING DIAGRAM
To help calculate the exact cycle time, please forward your proposed sequence.
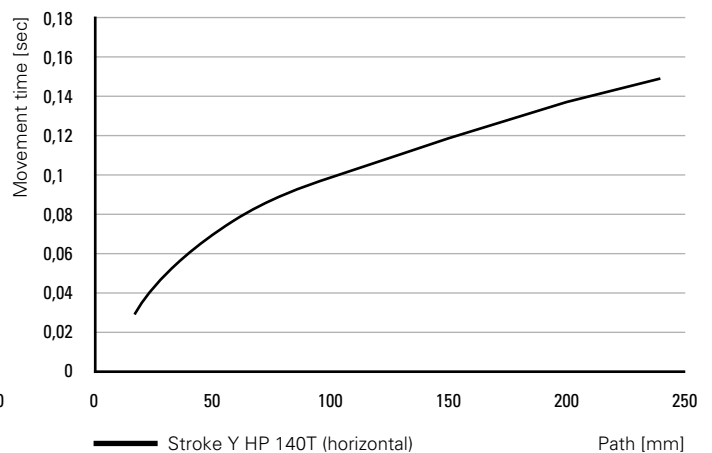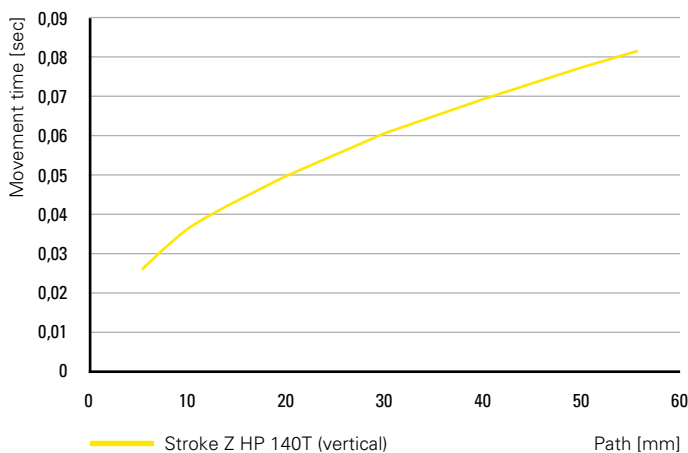
DIMENSIONS

Vertical stroke	B	B$_1$
65	478	296.5
100	581	371.5
150	653	471.5

Horizontal stroke	A	
160	402	*
270	512	*
300	542	*
400	642	*