Product Innovations 2024

OurPlant XTec+.

Extended workspace for even more process flexibility.

Meet the trends in micro assembly with a new generation of machines. The OurPlant XTec+ is the answer to constantly growing demands in terms of product complexity and miniaturization. Based on the established series production system OurPlant XTec, the OurPlant XTec+ has an additional larger movement range. Furthermore, the option area in the front part of the base plate enables the integration of large process modules and additional control units.

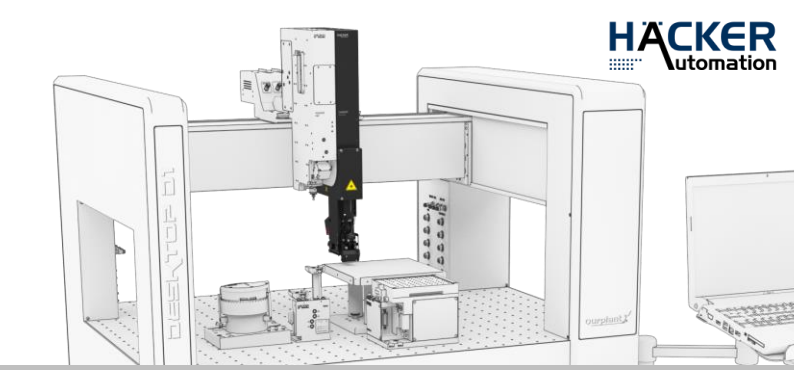
Movement range of the gantry:

X=592,5mm
Y=530mm

Maximum optional range of the base plate:
X=620mm
Y=417,5mm

OurPlant XTec+

- Dimensions (WxDxH)/ Weight: 1,735 x 1,455 x 2,400 mm/ approx. 1,200 kg
- Max, functional area in mm (X,Y) 592.5 x 530
- 2-axis gantry system (X, Y)
    - Repeat accuracy positioning X-axis: deviation ≤ ± 5 µm @ Cp ≥ 1.67
    - Repeat accuracy positioning Y-axis: deviation ≤ ± 5 µm @ Cp ≥ 1.67
- Processing heads with integrated Z-axis
- UV protective screens, optionally with laser protective screens
- Software and control with integrated industrial PCInterface with 10 electrical connections (5x CAN, 5x Ethernet) for mounting processing heads



Camera 2D/3D.

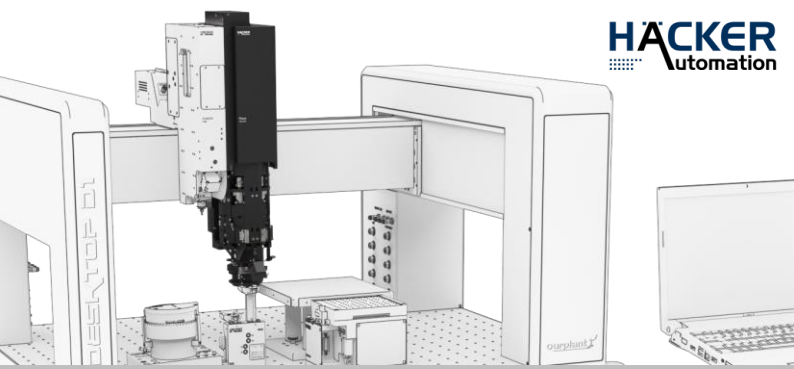
For more options in image recognition.

The 2D/3D camera is a new development for optical detection of reflective and diffuse component and substrate surfaces. The inspection of cavities and the detection of large workpieces are also possible. The advantages of a 2D camera and 3D camera are combined and united in one processing head. The captured image data is processed using the system control software. An integrated line laser enables the detection of the finest structures on reflective surfaces.

Error compensation algorithms ensure that deviations from target positions are corrected by realigning the processing heads. The Z-axis stroke of 150 mm also enables the detection of positions at very different heights.

Dimensions in mm	49 x 261 x 402
Weight:	4.45 kg
Travel range in Z in mm	150
Lens type	Telecentric and macro lens
Field of view in mm (W x H)	16.82 x 14.4
Z-axis resolution :	1 µm
Repeat accuracy Z-axis	±5 µm @ Cm ≥ 4.49
Resolution 2D camera	10.6 µm
Resolution 3D camera	14.0 µm
Depth of field of the 2D camera	± 1.3 mm
Depth of field of the 3D camera	± 1.7 mm

All lighting units can be controlled individually

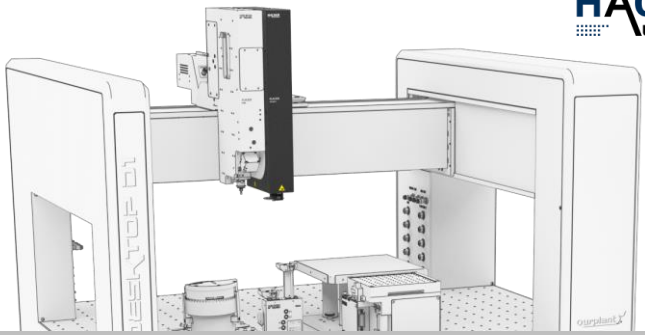


Placer HR.

Active alignment on a new level

The 3D placement head, Placer HR (Hexapod Rotation) was specially developed for active alignment tasks. In addition to a travel range of 150 mm in the Z direction, it has a movement range of +/- 50° around the movement axis. For the fine positioning and alignment of optical components, Häcker Automation has developed a hexapod with six axes, with movements in all 6 degrees of freedom. Mechanical tools, such as two-finger grippers, as well as vacuum tools can be attached to it. An additional adjustable observation camera allows the processing area to be viewed. The range of functions can also be extended to include contact pins, UV lamps, etc..

Dimensions in mm (W x D x H)	99 x 294 x 366
Weight in kg	11
Perm. product weight on the Hexapod in g	500
Travel range in Z in mm	150
Z-axis accuracy in mm	± 0,001
Voltage in V	48
Max. Amperage in A	3,2
Communication interface	Ethernet
Functional temperature range in °C	20 ... 35



Placer TD.

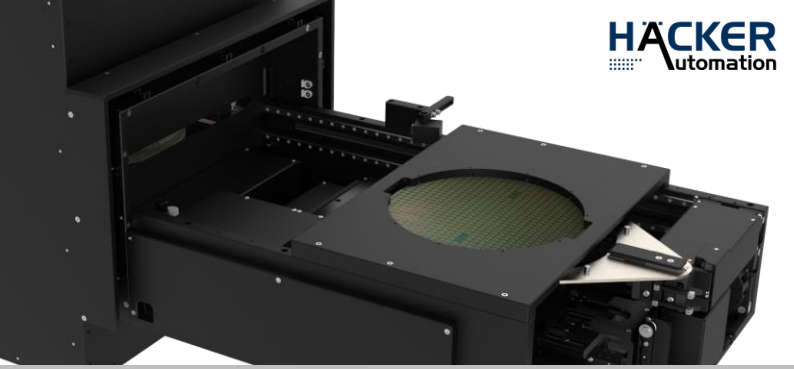
For safe processing of sensitive materials.

The Placer TD is a placement head designed for the precise alignment and placement of components. It is primarily used for component placing on pressure-sensitive substrates or when extremely precise measurement of the substrate height is required.

For this purpose, the placer has an inductive distance sensor in the Z direction, which detects when the component touches down on the surface of the substrate.

It is also possible to position the component in the Z-direction at a defined depth in a viscous or liquid medium.

Dimension in mm	49 x 261 x 364
Weight in kg	4,8
Travel range in Z in mm	150
Z-axis accuracy in mm	± 0,001
Movement range of rotation axis in degrees	0 ... 360
Rotation axis resolution in arsec	24
Voltage in V	48



DEU-8.

For frameless wafer handling.

With its needle system, the eject unit releases the components fixed on foil for transfer to the placement system. By replacing the automatically exchangeable needle system and the wafer frame adapter, a wide variety of components can be processed from frameless wafers up to 8 inches in size. The speed of the extraction needles is synchronized to the placement system and can be selected to suit the specific component.

The Die Eject Unit is available including a needle holder with cover and needle (needle-vacuum system) and a wafer adapter (if required).

For automated wafer loading, you can choose between a laser-safe single wafer feeder or an automatic wafer changer for up to 25 wafers.

Wafer:

- Frame wafer 4-8 inch, standard disc frame (metal, plastic) or expander ring
- Frameless wafer 4-8 inch

Wafer Loading

- EWE (single wafer loader)EWW (single wafer changer) Standard wafer cassettes (Disco, Entegris, etc.) max. 25 slots

- ✓ Wafer Notch-Alignment
- ✓ Illuminated needle vacuum system
- ✓ Heated needle vacuum system
- ✓ Rotatable needle vacuum system
- ✓ Automatically changeable needle vacuum system, up to 5 needles