

ACE Group

Complete and Fully Automated Production Line of Solar Panels

Equipment List:

Freiburg, Bebelstr. 6/ Production/ Line 3

1 glass loading station, twin design, 2 trolleys, 1,200 x 2,200 mm, handling robot, make Reis/Kuka, type KR240L180-2-2000 (2008), 2 high speed doors, make Albany,switchgear/control cabinet,2 fans, make Trotec, type TTV4500HP (2012).

1 glass washing station, make Buxtrop, 2,500 x 3,000 mm, stainless steel, infeed roller conveyor, 2,500 x 3,000 mm, extraction system, make Rippert, type HD-100-4000B5S (2008), volumetric flow rate 4,000 m³/h, motor power 18.5 kW, water treatment plant, make Kineteco, rotary pump, make Grundfos, plastic water tank, capacity 1,000 l, piping, vertical inspection table, 2,000 x 2,500 mm, tilting table,2,000 x 2,500 mm

1 foil application station, incl.: gantry robot, make Reis (2008), axis 1,500 mm, Y axis 1,000 mm, vacuum exhauster, foil feeder unit, make Robust, cutter unit, make Simco, foil winding station, make Robust, working width 1,600 mm, ink-jet printer, make Leibinger,w. controller, type Systec Xeno R612CE, interim storage paternoster, H 3,000 mm, crosswise inverter/flip unit, belt conveyor, L 3,000 mm, 4 lines, transfer stairs, aluminium, 6 steps, belt conveyor, 6,500 x 3,000 mm, rotary table 1,500 x 1,000 mm, vacuum panel lifting unit, make Fezer, type VPL 120 (2005), load capacity 35 kg, pillarmounted slewing crane, 4,000 x 4,000 mm

1 vacuum panel lifting unit, make Fezer, type VPL 120, built 2005, load capacity 35 kg, pillar-mounted slewing crane, 4,000 x 4,000 mm

3 belt conveyors, 5,500 x 2,000 mm each, tape/ribbon placement station, make Reis, w. gantry robot, make Reis, type RL26 (2008), X axis 4,000 mm, Y axis 1,000 mm, 4 belt conveyors, 2/4 lines, 2 aluminium bridging steps, each w. 6 steps

1 stringer unit, make Somont, type Rapid Four, built 2008, capacity 2,400 cells/h, each w. loading station, band station, alignment unit, soldering station, inspection station, L per unit 8,000 mm, lay-up device

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1 gantry robot- offtake station, make Reis, type RL80, built 2008, range of motion X 6,000 mm, 4 belt conveyors, 2 lines, 600 x 2,000 mm each, 2 belt conveyors, 4 lines, 1,500 x 2,000 mm each, 6 belt conveyors, 2 lines, 600 x 2,000 mm each, 2 belt conveyor cross tables, 2 belt conveyors, 4 lines, 1,500 x 2,000 mm each, inspection table, L 3,000 mm, turn feature, w. lighting, belt conveyor, 2 lines, 600 x 4,000 mm, cross table, 4 lines, 3 belt conveyors, 4 lines, 1,500 x 1,200 mm each, aluminium bridging steps, make Zarges

1 inspection table, L 3,000 mm, turn feature, w. lighting

2 work tables, 2 chairs

8 inspection/rework tables, aluminium structure, L 2,000 mm each

1 laser unit, make Reis, incl.: 2 gantry robots, type RL26 (2008), each w. laser cell, type SPS, range of motion 1,500 x 2,000 mm, input control, make Siemens, type Simatic Multipanel, 2 control cabinets, make Rittal, airconditioned, PC, 19" monitor, laser cabin enclosure, 5,000 x 5,000 mm, inspection table, L 2,000 mm, w. lighting, integr. turn station, crosswise inverter/flip unit, belt conveyor, 2 lines, L 2,000 mm, lifting/turn unit, interim paternoster, H 3,500 mm, 1 exhaust extraction system, make Plymovent, w. pipework

If there are any wall damages during dismantling they have to be closed expertly!

1 foil application station, incl.: foil cutting/winding machine, make Robust (2008), working width 1,200 mm, gantry robot, make Reis, type RL80 (2008), range of motion 5,000 mm, vacuum lifting unit, belt conveyor, 600 x 2,000 mm, belt conveyor w. lifting/turn unit, belt conveyor w. protective enclosure, aluminium bridging steps, make Zarges, 6 steps, belt conveyor, 2 lines, 600 x 2,000 mm, inverter/flip belt conveyor, w. safety enclosure, belt conveyor inspection table, 2 ball transfer tables, 1,500 x 2,000 and 1,500 x 4,000 mm, belt conveyor inspection table

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1 batch strings, prefabricated in 4 transportation frames

1 gantry robot, make Reis, type RL130, built 2008, range of motion 16 m, 5 support pillars, H 3,000 mm, module handling attachment, belt conveyor, 6 lines, 1,600 x 3,000 mm, protective wire mesh enclosure

1 laminator, make 3S, type S3622CP, built 2008, L 9,000 mm, belt conveyor, w. 6 lines, 1,600 x 3,000 mm, belt convey, w. 6 lines, 1,600 x 1,500 mm, visual inspection station

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1 gantry robot, make Reis, type RL130, built 2008, L 16 m, 5 support pillars, H 3,000 mm, transfer bridge/belt conveyor, L 5,000 mm, H 2,500 mm, interim paternoster, 3,000 x 3,000 x 2,500 mm, integr. fan, integr. belt conveyor, 2 lines

1 handling robot, make Reis, type RV60LS, built 2008, 2 belt conveyors, each w. 2 lines, 600 x 2,500 mm, electr. inclined belt conveyor, 500 x 3,500 mm, box trimming unit, high speed door, make Albany, H 3,500 mm, protective wire mesh enclosure, 6 transportation shelves

1 complete assembly station "junction box", incl.: 2 handling robots, make Reis, type RV20-16 (2008), belt conveyor, 2 lines, 600 x 4,000 mm, camera monitoring station, make Vitronic, type 95125, control unit, monitor, roller conveyor, 700 x 3,000 mm, material buffer, protective wire mesh enclosure, silicon dosing station, incl.: 2 pumps, control cabinet, feed line, 3 handling robots, make Reis, type RV40XL (2008), 2 tap stations, control system, make Siemens, belt conveyor, 2 lines, 600 x 2,000 mm, 2 gantry robots, make Reis, type RL16 (2008), type RL80 (2008), axis 3,000 mm, 2 transport conveyor systems, 1,800 x 5,000 mm, 2 levels, oscillating troughed conveyor, pressing table, 2,000 x 4,000 mm, pneum. clamping units, cross belt conveyor, protective wire mesh enclosure, interim storage paternoster, H4,000 mm, silicon application machine, make GLT, type JR-2303, work table, integr. mini roller conveyor

1 sunlight simulator, make Berger, type PSSHS, built 2008, power 1,700 W, control system, make Berger, metal enclosure, make Reis, 3,000 x 3,000 x 6,000 mm, belt conveyor, 2 lines, 600 x 2,000 mm, belt conveyor, 2 lines, 700 x 2,000 mm, integr. labelling unit, make Bluhm, protective

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wire mesh enclosure, 2,000 x 3,000 mm, 2 belt conveyors, 600 x 1,500 mm each, lifting and inverter/flip station, belt conveyor, 2 lines, 600 x 2,500 mm, module lifting unit, inspection station, tilting design, wire mesh enclosure, 1,500 x 4,000 mm, high speed door, make Albany, 1,500 x 2,500 mm, belt conveyor, 2 lines, 600 x 2,500 mm, belt cross conveyor, 2 lines, belt conveyor, 2 lines, 400 x 2,500 mm, separate vacuum panel lifter, slewing crane, 4,000 x 4,000 mm, ball transfer table, 2,500 x 2,500 mm, label printer, make Zebra, type S4M, PC, 17" monitor, make Belinea, keyboard, mouse, label printer, make Zebra, type Z4MPlus, solar module testing unit, make MBJ, type SM-EL Quickjet (2014), roller conveyor, W 700 mm, L 1,500 mm, vacuum panel lifting unit, make Fezer, type VPL120 (2014), load capacity 35 kg, slewing crane, H 3,000 mm, jib 4,000 mm, 2 ball transfer tables, 2,000 x 3,000 and 1,500 x 2,300 mm, mini roller conveyor, aluminium structure, 1,500 x 2,200 mm, inspection table, aluminium structure, 1,400 x 1,800 mm, integr. lamp, vacuum panel lifting unit, make Fezer, type VPL120 (2004), load capacity 35 kg, pillar-mounted slewing crane, H 4,000 mm, jib 4,000 mm, calibration cabinet

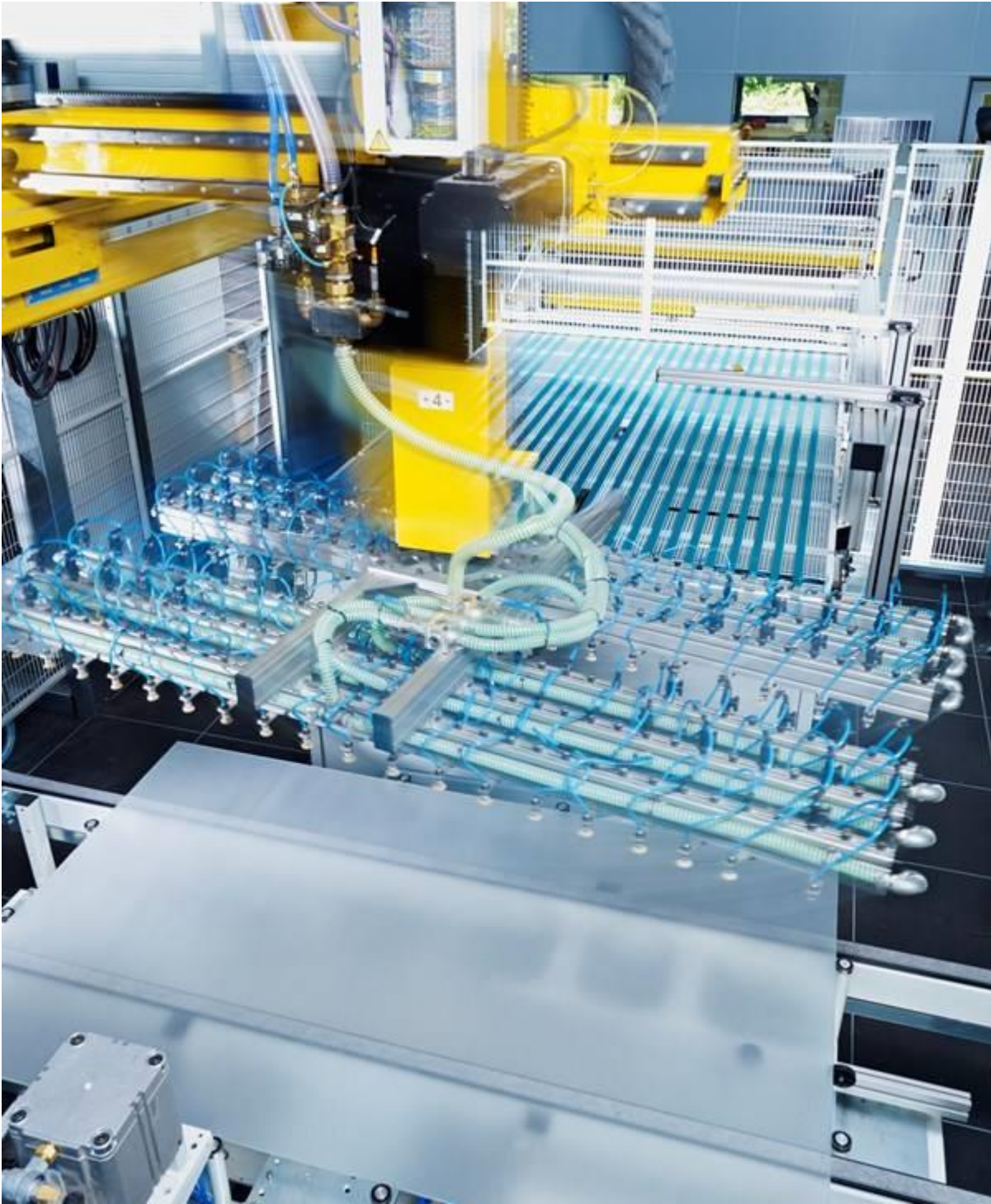
1 storage/palletizing station, incl.: belt conveyor, 2 lines, 600 x 3,500 mm, belt conveyor, 2 lines, 600 x 4,500 mm, labelling device, make Leibinger, type InkJet-System 3 (2009), gantry robot, make Reis, type RL80 (2008), range of motion 15 m, 4 support pillars, H 2,100 mm, vacuum panel lifting unit, 6 suction cups, 3 storage paternosters, make Hänel Lean-Lift, type 2060-1270 (2008), commission number 324624/2-3, max. container load 150 kg, max. total load 2x 15,000 kg/paternoster, W/H/D 2,000 x 5,000 x 4,000 mm, control system, make Siemens, type Simatic/Sumako, wire mesh enclosure, palletizing station, incl.: 3 belt conveyors, each w. 2 lines, 600 x 1,300 mm, 600 x 2,000 mm and 600 x 2,200 mm, transfer table, 2 pallet tilting stations, make Reis, 2 high speed doors, make Albany, 2,500 x 3,500 mm, corner part assembly station, material feeding station, gantry robot, make Reis, type RL300 (2008), range of motion 15 m, 3 supports, H 2,200 mm, vacuum panel lifting unit, protective wire mesh enclosure, bridging platform, make Zarges, 6 steps

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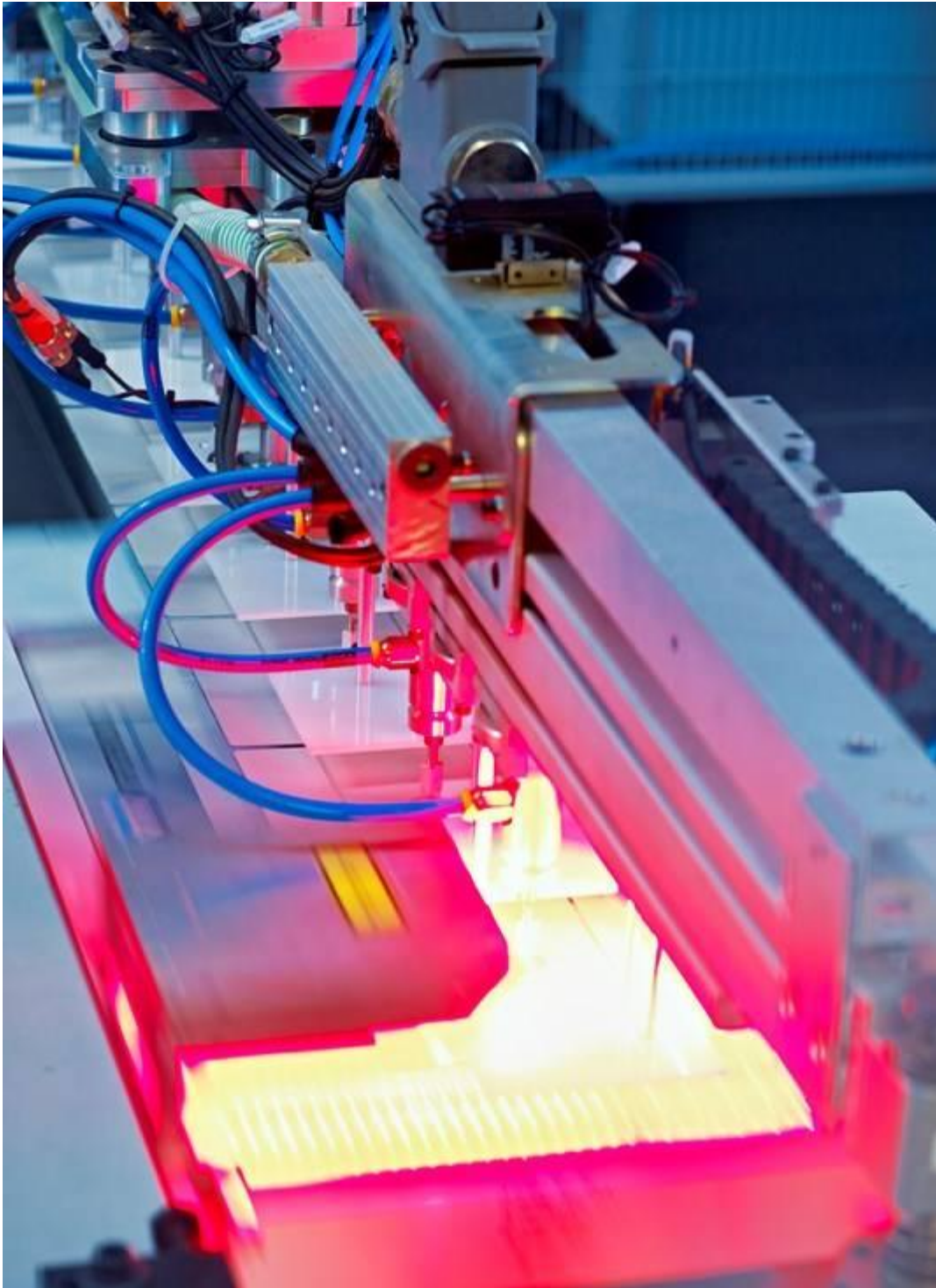
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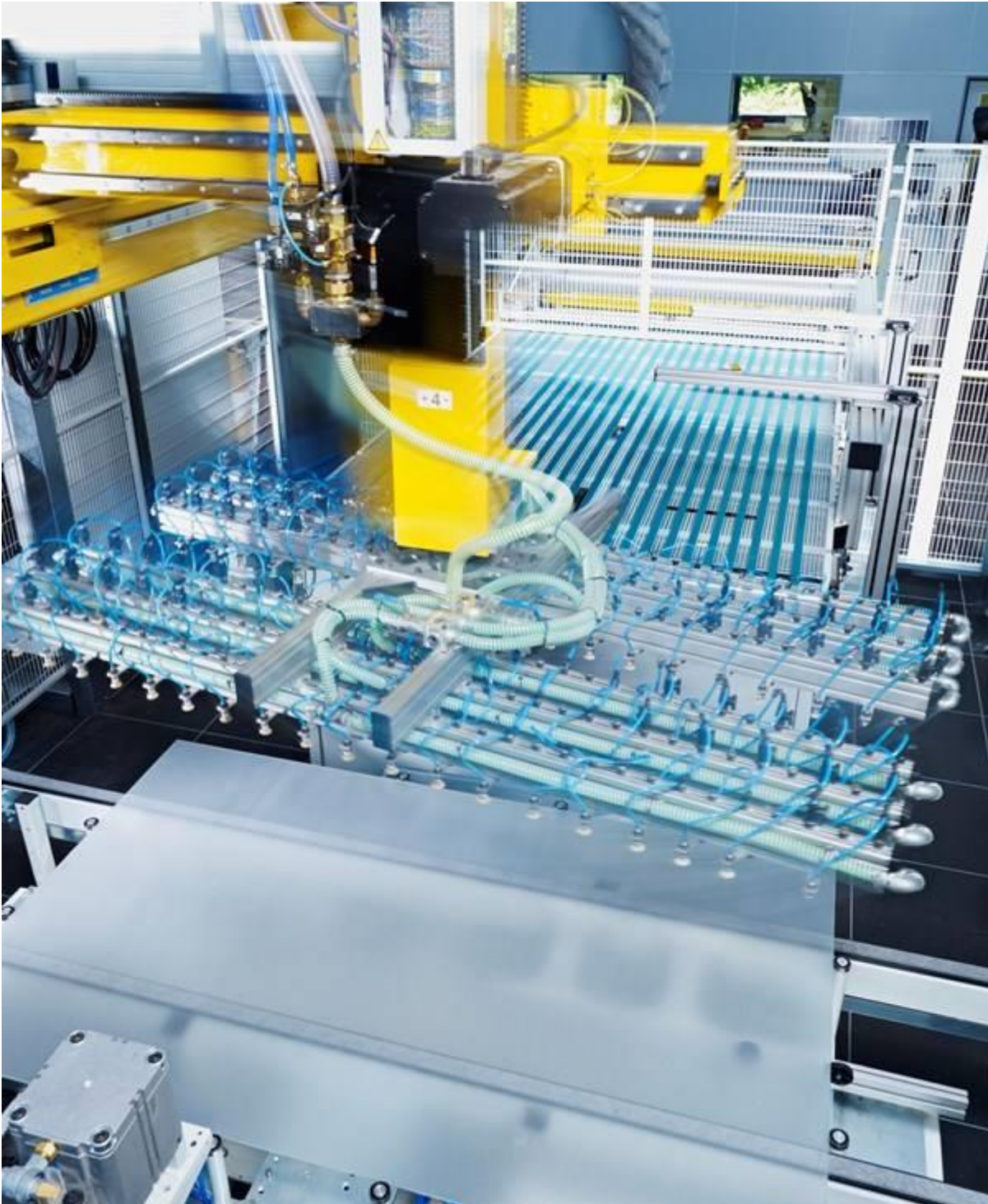
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