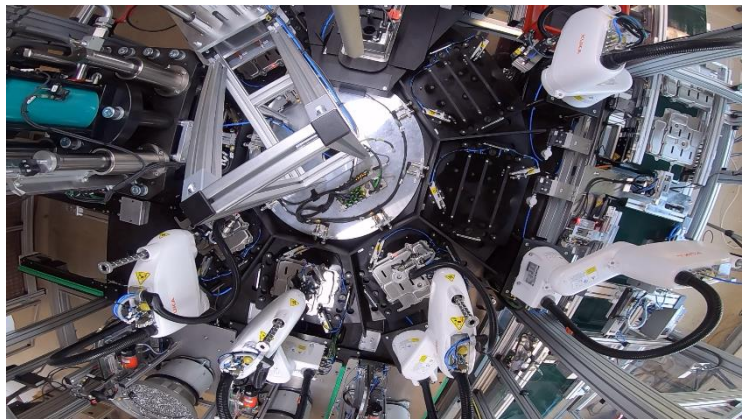


Automatic assembly machine with joining module



- Machine for automatic caulking of metal studs with formed sheet metal parts, adaptable to an extremely varied range of parts.
- Assembly principle:
 1. Supply of the sheet metal parts by means of the conveyor belt
 2. Supply of the bolts via round conveyor pots with hopper
 3. Automatic equipment of the sheets with bolts
 4. Caulking
 5. Label application by laser marking
 6. Automatic separation of OK and NOK parts
- Handling by robots with suction and gripping tools
- Easy changeover for an immense variety of different workpiece types
- Short cycle time due to parallel execution of operations with dial table
- High caulking process reliability due to load measuring system



Technical Data

Workpieces	Assemblies of sheet metal parts and sleeves, bolts, tubes, rivets or similar (e.g. cover plates, covers or bases for electronic control units)	
Workpiece dimensions		
Sheet thickness	approx. 1–3 mm	
Outer sheet metal part dimensions	max. approx. 320x320 mm	
Bolt diameter	approx. 2–20 mm	
Number of bolts per sheet	1–10	
Assembly operation	Caulking, joining, riveting	
Tools		
Joining module	with force control	
Industrial robot	Kuka	
Dial table	Weiss	
Marking laser	cab, Keyence or others	
Laser smoke extraction system	Fuchs, Kemper, ULT or others	
Cycle time	approx. 5.5 sec	
Machine control / data processing	PLC SIMATIC S7-1500	
Visualisation	stationary and mobile touch panel, touch monitor	
Data archiving	in database on system PC	
Electrical characteristic data	IEC	UL / CSA
Supply	400 V / 50 Hz / 63 A	480Y/277 VAC / 60 Hz / 63 A
Control voltage	24 V DC	24 V DC
Connected load	10 kVA	10 kVA
Compressed air connection	6 bar, 1"	
Airborne noise emission		
Maximum sound pressure level	<84 dB(A)	
Equivalent permanent noise level	<77 dB(A)	
Machine dimensions		
Width	approx. 6.3 m	
Depth	approx. 5.5 m	
Height	approx. 2.5 m	
Weight	6,000 kg	