



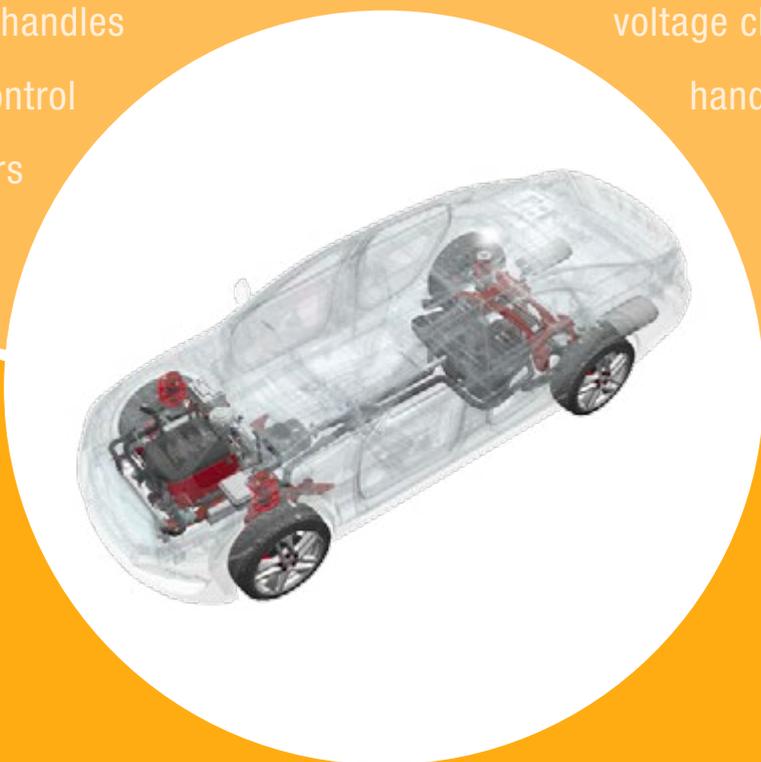
THANKS TO OUR SIXTH SENSE WE FIND THE ESSENCE OF THINGS, WHICH LEADS TO OUR SUCCESS.



AUTOMATION LINES

Automotive industry

passenger's glove compartments boot and ceiling panes
cables accelerator pedal and clutch pedal cooling valves
brake yokes sun visors central tunnels door limiters
cable connectors fuel filters wheel suspension bearing
Door protector switch boxes keys hood and door lock
modules under steering wheel front and rear headlamps
ceiling handles voltage changers
door control hand brakes
bumpers mirrors
hinges radios



LINES FOR AUTOMATION IN THE AUTOMOBILE INDUSTRY

We develop, manufacture and carry out service of manufacturing lines designed for the automation of production in the automobile industry.

Together with OEM and TIER 1 suppliers, we participate in the development of assembled components with stress on trouble-free assembly.

During the development and manufacturing of production lines, we make use of experience acquired during the realization of lines for the particular part.

the sense of technology

ASSEMBLED PRODUCT:

Interior handle, 13 components

USED TECHNOLOGIES:

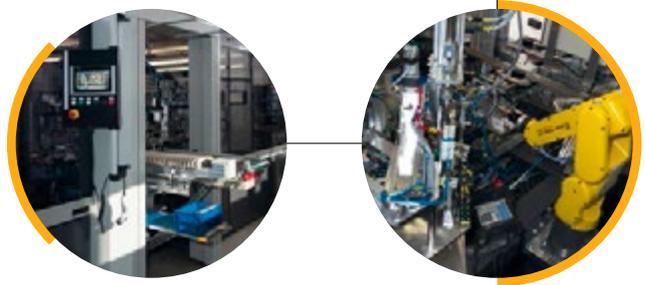
- Automated assembly line, synchrony conveyor
- Robotized handling, assembly
- Lubrication, labeling, stamping, inspection

CYCLE TIME:

- 6,5 sec/unit

HIGHLIGHTS:

- Component assembly in the prestressed components
- Flexibility despite of wide components variability



ASSEMBLED PRODUCT:

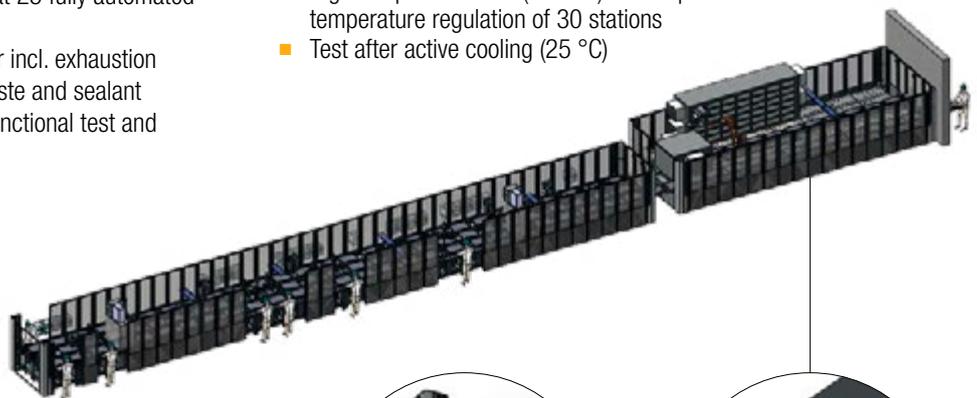
Voltage converter, 93 components

USED TECHNOLOGIES:

- Semi-automated assembly line, asynchrony conveyor
- 6 operators, 31 stations, from that 25 fully automated
- Automated assembly of PCB part
- Cleaning of the part by ionised air incl. exhaustion
- Robotic application of thermal paste and sealant
- High voltage test, leakage test, functional test and calibration
- Laser marking
- Automated screwing

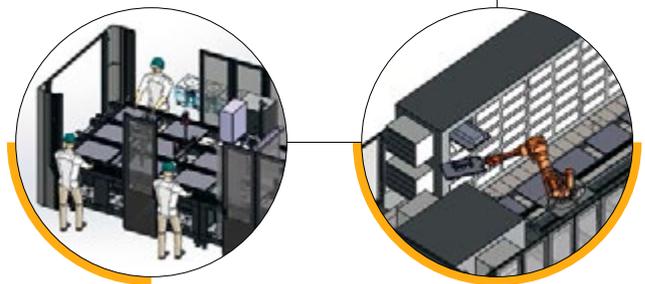
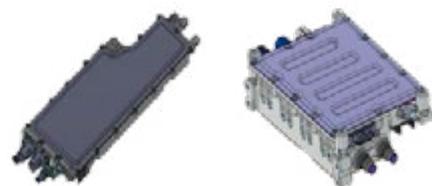
HIGHLIGHTS:

- High voltage test (2,500 V)
- High temperature test (120 °C) with separated temperature regulation of 30 stations
- Test after active cooling (25 °C)



CYCLE TIME:

- 50 sec/unit



ASSEMBLED PRODUCT:

Door protector, 19 components

USED TECHNOLOGIES:

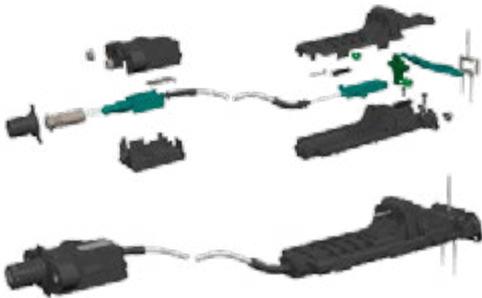
- Two six-axes robots, lubrication – 200 spots, screwing
- Laser marking

CYCLE TIME:

- 45 sec/unit

HIGHLIGHTS:

- Movement and mechanism resistance testing
- Multifunctional robot head



ASSEMBLED PRODUCT:

Fuel filter, 32 components

USED TECHNOLOGIES:

- Assembly, stamping, screwing, lubrication, ultrasonic welding
- O-rings fitting-on

CYCLE TIME:

- 22 sec/unit

HIGHLIGHTS:

- Helium leakage test
- Heating test (80 A)



ASSEMBLED PRODUCT:

**Multifunction controller,
17 components**

USED TECHNOLOGIES:

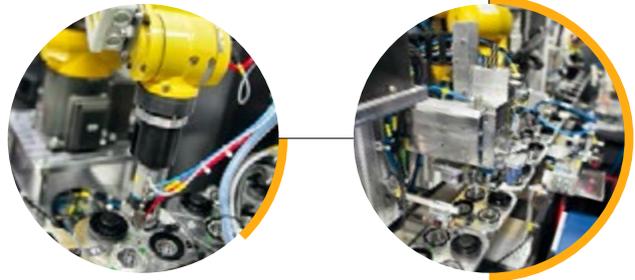
- Semi-automated line, synchrony conveyor
- Six-axes robot, scararobot, assy
- Spot lubrication, stamping
- Camera control, quality tests

CYCLE TIME:

- 20 sec/unit

HIGHLIGHTS:

- Precise quality tests
- Precise assembly of small components



ASSEMBLED PRODUCT:

**Sun visor, 8 components,
3 variants**

USED TECHNOLOGIES:

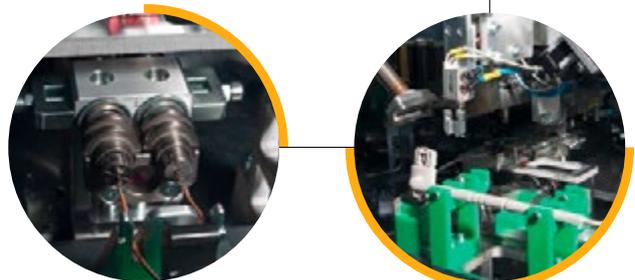
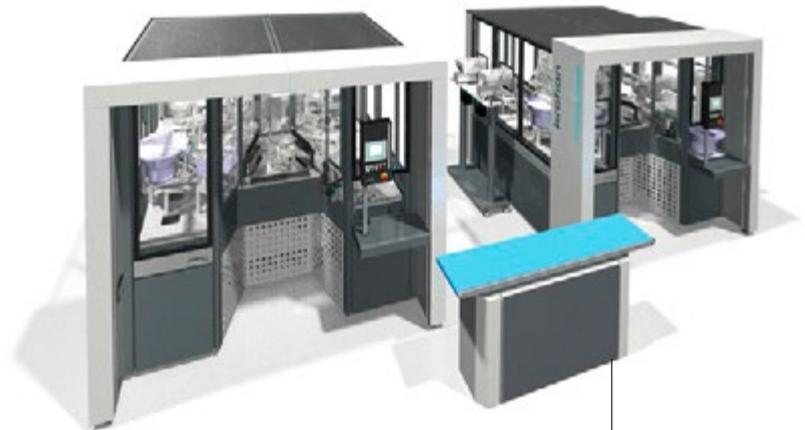
- #1 carousel assembly, stamping, color test
- #2 connector assembly, arm movement, conductivity tests

CYCLE TIME:

- 10 sec/unit

HIGHLIGHTS:

- Test of arm movement resistance
- Measurement and color differences recognitions
- Short circuit/conductivity/insulation resistance tests



ASSEMBLED PRODUCT:

**Door handle TIG VW Passat B8,
9 components**

USED TECHNOLOGIES:

- Semi-automated assembly line
- Ultrasonic welding
- Laser marking

CYCLE TIME:

- 22 sec/unit

HIGHLIGHTS:

- Mechanics tests (handle movement – force, distance)
- Assembly of pre-stressed spring



ASSEMBLED PRODUCT:

**Connector, 3 to 6 components,
Male/Female design, 2 variants**

USED TECHNOLOGIES:

- Camera controls, 8 colors of a component recognition
- Assembly, inspection

CYCLE TIME:

- 2,5 – 3,5 sec/unit upon the variant

HIGHLIGHTS:

- Recognizing the type and the position of the components by the camera



ASSEMBLED PRODUCT:

Valve of motor cooling system, 17 components

USED TECHNOLOGIES:

- Semi-automated assembly line
- Assembly, soldering, leakage test, electrical functional test
- Camera quality control

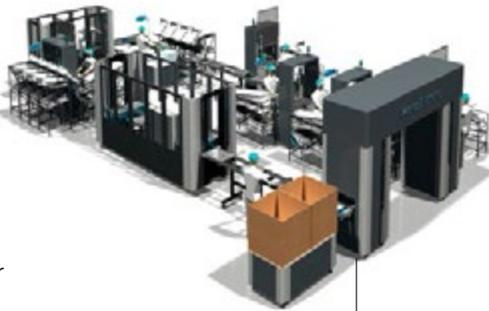
CYCLE TIME:

- 10 sec/unit



ASSEMBLED PRODUCT:

Spring-back Mirror Set R+L, 3 types, 34 components



USED TECHNOLOGIES:

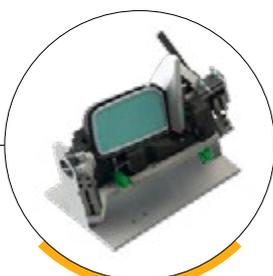
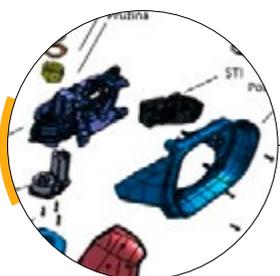
- Semi-automated line, asynchrony conveyor
- 8 operators, 13 stations
- Automatic screwing, camera quality control, lighting test, heating test, mechanical motion test
- Laser marking

CYCLE TIME:

- 16 sec/unit

HIGHLIGHTS:

- Lighting test (logo projection, indicator test)
- Heating test
- Mechanics test



The benefit of cooperation with company KROFIAN CZ:

COOPERATION WITH KROFIAN CZ WILL MOSTLY MEAN:

- **Reliable and economic solution** of your requirements for automation:
 - Confirmed by more than 15 years of experience with automation
 - Experienced team capable of solving difficult problems
 - Documented by customer references
- Long-term **financial stability** of KROFIAN CZ confirmed by renowned companies
- Utilization of components from renowned manufacturers and perfect workshop processing
- Elaborate **company management system**
- Progressive **design** to intrigue your customers
- Advisory services in the area of automation in **developing** your products
- **Reliable running** of the facility thanks to K-SERVICE services

Our assembly lines produce components for prestigious producer:



K-DESIGN NG

A NEW DIMENSION IN THE CONSTRUCTION OF MODULAR MACHINES



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