



Expertise in Automation

2019

TECHNOLOGY

DYNAMISM

PROGRESS

STABILITY

WWW.ASYST.VIDEOTON.HU

WWW.TIPA.HU

CONTENTS

- **Videoton Group**
- VT ASYST / TIPA / SRB
- Applied Technologies
- References



- Privately owned, financially strong, vertically integrated industrial group in best-cost Europe
- One of the leading European EMS providers
- Turn-key & flexible contract manufacturing partner for both established multinationals and young innovative emerging companies
- Competent multi-commodity supplier of parts, modules and assemblies
- Complex service provider owning and operating industrial parks

HIGHLIGHTS

Founded in
1938

Private since
1992

Revenue
(2018)
590
Mill €

Equity
No debt since 2005
394
Mill €

1st
Most Valuable
Company in HUN
Ownership*

12
Locations

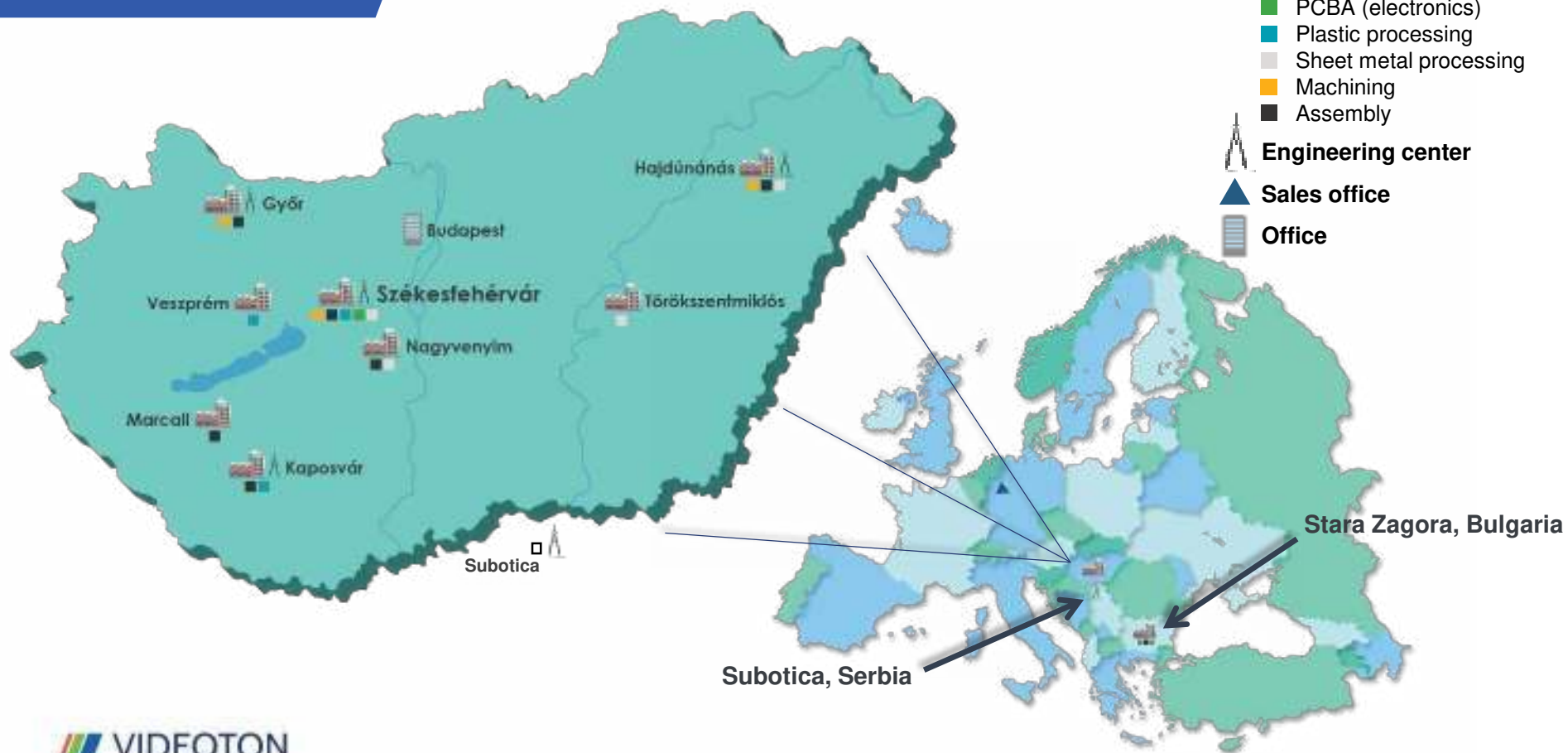
9.600
Employees**
(December 2018)

3rd
Among EMS
Companies HQ'd
in Europe

** According to Forbes in 2017 and 2018*

*** 2600 employees in Services*

LOCATIONS



GROUP STRUCTURE

VIDEOTON HOLDING

Property Mgmt

Controlling

Finance

HR

Legal

IT

Business Development

Sourcing

Design & Engineering

Manufacturing Subsidiaries

PCBA & Box build assy.



VT Automotive Electronics
Automotive EMS
Box build assembly



Videoton EAS
Non-automotive EMS
Box build assembly



Videoton EAS Bulgaria
Non-automotive EMS
Box build assembly

Part mfg. & Box build assy.



VT Elektro-PLAST
Assembly & box build
Plastic injection moulding



VT Battery Technology
Battery pack assembly



VTES
Sheet metal fabrication
Enclosure manufacturing
Box build assembly



VTBH (Bulgaria)
Electromechanical and mechanical
assembly & box build services



VT Mechatronics
High complexity assembly
and machining



VT ASYST
Robotized assembly lines
Testers

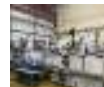


TIPA
Robotized assembly lines
Testers

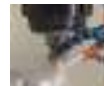
Part mfg. & Heavy duty assy.



VT Plastic
Automotive-focused injection
moulding



VT Bulplast (Bulgaria)
Thermoplast injection and thermoset
injection and compression moulding
Tooling



VT METAL
Medium to high volume machining
Electroplating, KTL



KVJ Muvek
Stamping w/ presses



VT Precizios
Injection moulds



VENTIFILT
Heavy-duty fans, filters
Large steel fabs



VT-Systemtechnics
Shelter / container mfg.

Services Subsidiaries



Pannonjob
HR services



Industrial Park
Building lease & services



VT ARtrans
Logistics services



Pannonfacility
Facility management

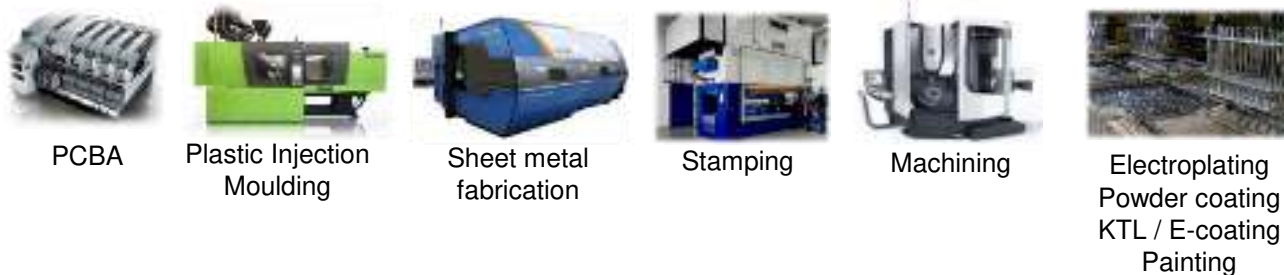
INTEGRATED MANUFACTURING SERVICES

Value chain / Vertical integration

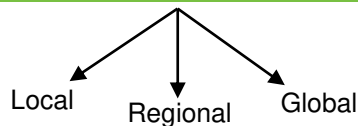
Box build assembly & System integration



Core technologies



Supply chain



Design & Engineering



CORE TECHNOLOGIES

PCB ASSEMBLY AND TESTING



BOX BUILD ASSEMBLY



PLASTIC MOULDING



SHEET METAL PROCESSING



MACHINING



FURTHER MANUFACTURING COMPETENCES

**ROBOTIZED ASSEMBLY
LINES, TESTERS**



**HIGH PRECISION
EQUIPMENT ASSEMBLY**



**CUSTOMER-SPECIFIC
SHELTERS**



**BATTERY PACKS
ASSEMBLY**



**LARGE WELDED
STEEL CONSTRUCTIONS**



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SUMMARIZED HIGHLIGHTS

Established

1995

TIPA

Established

1996

ASYST (as BU)

Revenue
(2018)

11 mill €

ASYST + TIPA 2018

93%

Automotive

Engineering

64

Engineers



Machining

20

Millers, turners

Assembling

31

Technicians

Engineering, machining, assembly, programming, install. All parts of making special machines are in one hand. With a strong background support of VIDEOTON.

LOCATIONS



DESIGN

- Mechanical design and control techniques
- 3D modelling, FEM simulation
- Robot simulation & integration
- Prototypes for technological test



<i>Engineers</i>	ASYST	TIPA	SRB
Mechanical Designer	12	13	4
Automat. Engineer (PLC)	8	8	-
Electrical Engineer	4	5	-
PC Software Engineer	4	2	-
Robot program Engineer	2	2	-

PRODUCTION OF PARTS

The VT-ASYST has its own tool shop, therefore we are able to manufacture the designed parts in-house. Our main machines are supported by CAM.



Milling, Welding, Grinding, Turning, etc.



We are able to produce all parts of our machines.

ASSEMBLY

Where parts become machines...

- Mechanical-assy, electrical-assy, wiring, adjusting on ~1450 sqm
- Assembly is supported by engineers and 3D modell
- STATIC-ACCURACY MEASURING by portable measuring arm



 **VIDEOTON**



Only fully functional machines are delivered after Factory Acceptance Test (FAT).



PROGRAM

- PLC experiences
- Software design
- HMI design
- Robot programming
- Traceability (RFID)
- MES communication
- Data Acquisition



SIEMENS



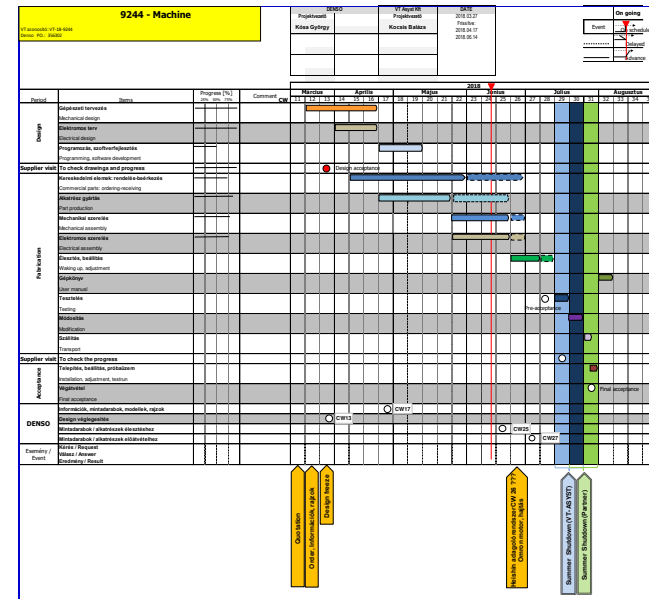
OMRON
Industrial Automation

BECKHOFF

 **VIDEOTON**

Project management

- 
- A group of people are gathered in a meeting room. One person is standing and addressing the group, while others are seated at a long table, looking towards the speaker. The room has large windows and a modern interior.



EDUCATION / TRAINING

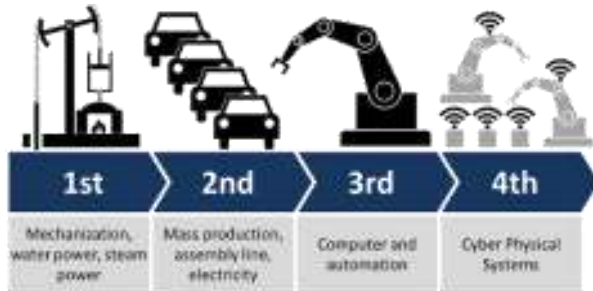


Training (5.S - Shitsuke):

Training, education and different type of courses for every engineer in every month.

Education:

We are in active cooperation with local universities, train skilled workers by ourselves and contribute to the Industry 4.0 National Technological Platform of Hungary.



QUALITY ASSURANCE

Quality Standard:

➤ ISO 9001:2015



OUR PARTNERS



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APPLIED TECHNOLOGIES



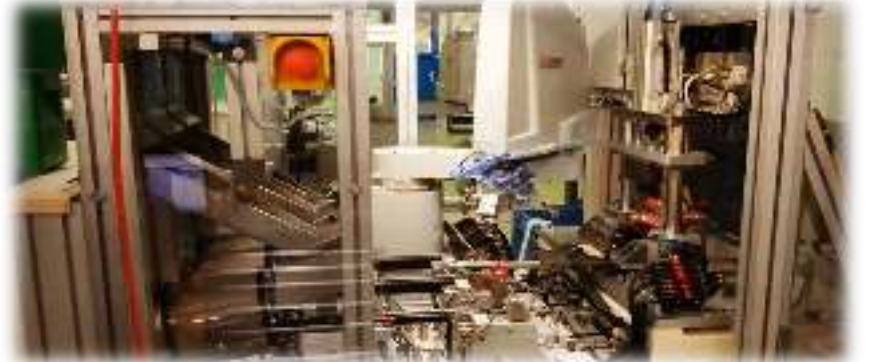
Feeding



Palettizing



Assembly - Packaging



Handling

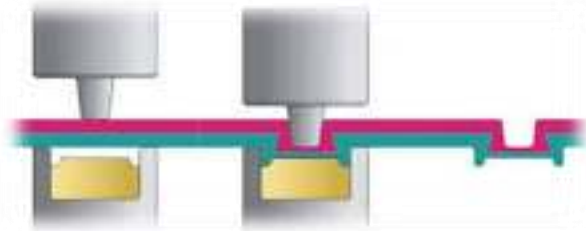
APPLIED TECHNOLOGIES



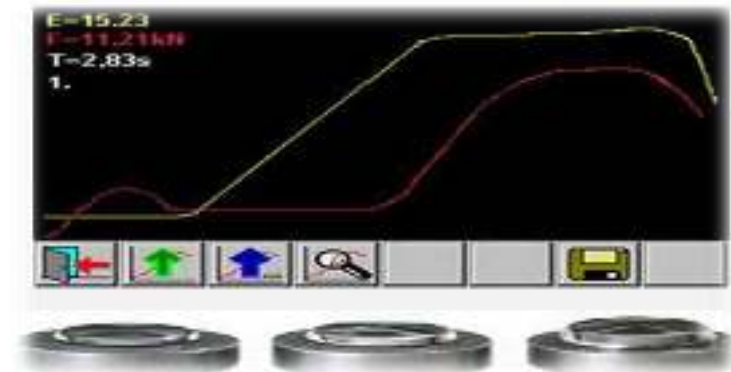
Screwing



Press-Fitting



TOXing



Rivetting

APPLIED TECHNOLOGIES



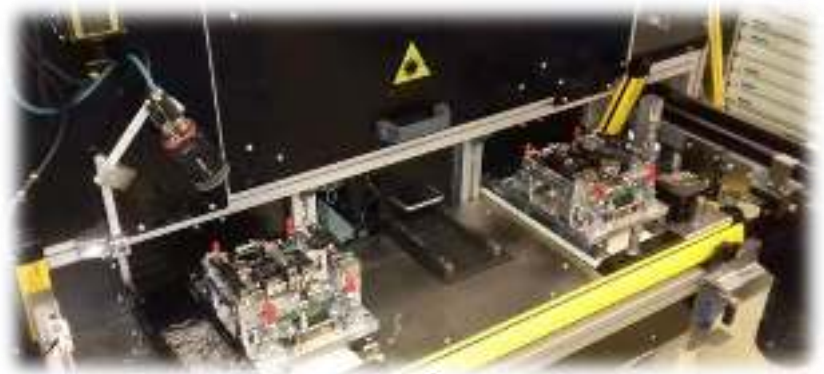
Marking (laser, ink-jet, label)



Welding



Vision (measuring, recognizing, checking)



Laser Welding

APPLIED TECHNOLOGIES



Electrical Function testing



Mechanical Function Testing

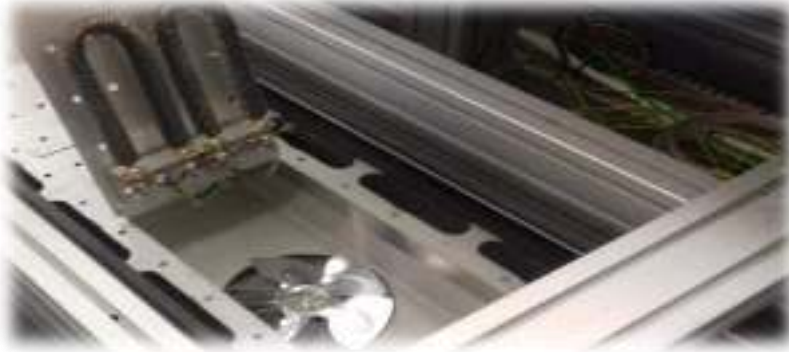


PCBA Testing



Leakage testing

APPLIED TECHNOLOGIES



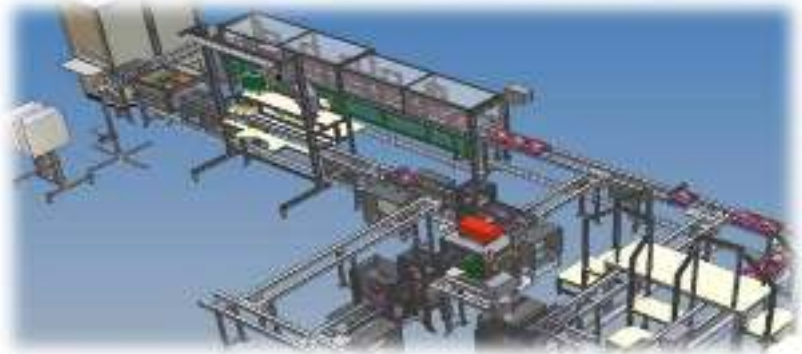
Thermal Processing (Heating / Cooling)



Dispensing / Potting / Glueing



Cutting / drilling/ taping



Assembly – Line building

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WE MADE IT...



Full automated TCM testing line:

- **BOSCH transport system**
- **Electro-mechanical function testing (index, wiper, etc)**
- **force-way, torque-angle measuring**
- **laser marking, automatic scrap separator**
- **Data Acquisition by Beckhoff**



WE MADE IT...



Robot applications:

- Robot Handling
- Additional technologies (oiling, screwing, measuring, leaktest, etc.)

WE MADE IT...



Pipe press fitting:

- Feeding,
- Camera checking
- Press-fitting with force-way measuring
- Length measuring by touching probes
- Diameter measuring by laser
- Palettizing



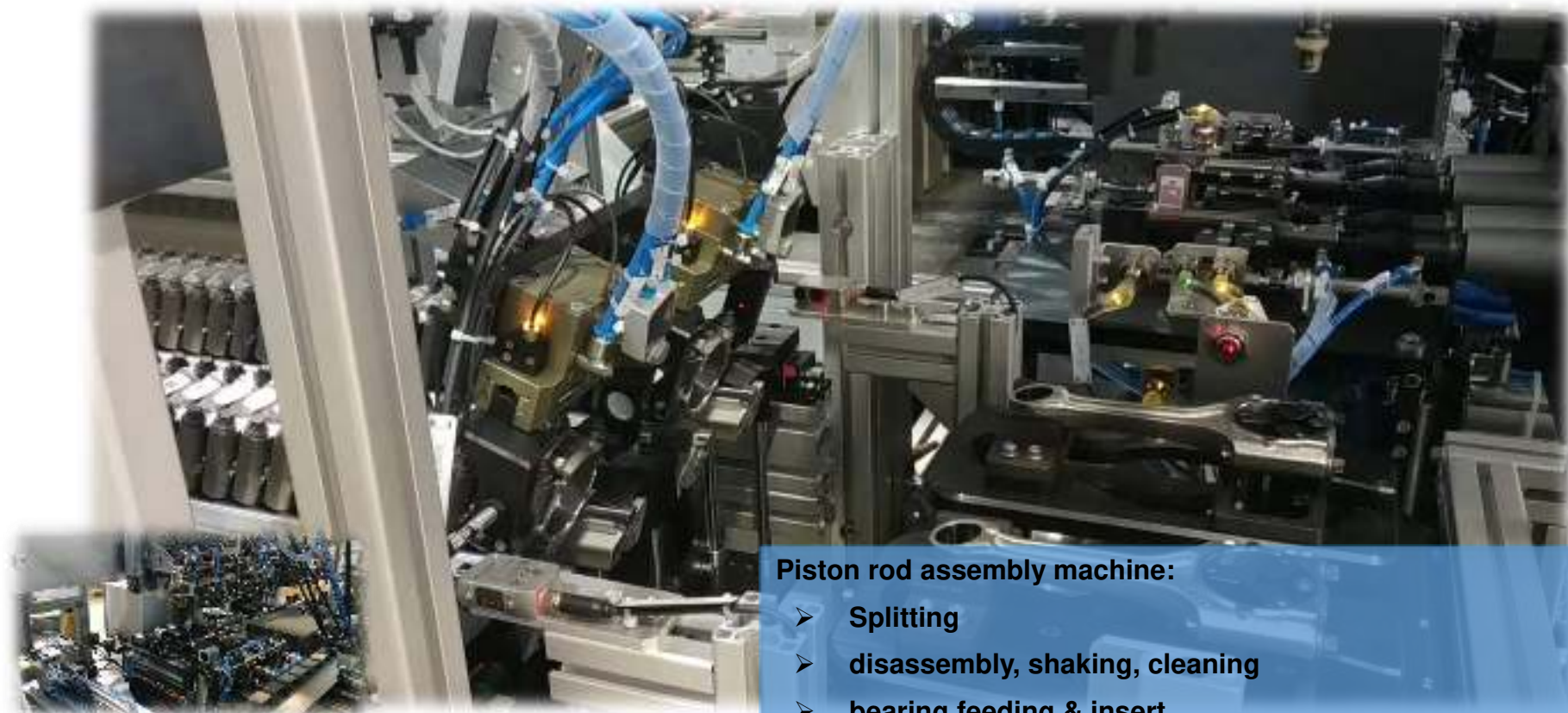
WE MADE IT...



IC cutting, welding & packaging:

- Automatic material handling, cutting, welding, palettizing
- IC cutting, IC pin performing
- Heat staking, welding
- Cycle time: 5,5 sec, 3 types

WE MADE IT...



Piston rod assembly machine:

- Splitting
- disassembly, shaking, cleaning
- bearing feeding & insert
- Cycle time: 14 sec, rods: 2 types / bearings: 7 types

WE MADE IT...



Glue & grease feeding:

- Automatic material dispensing
- Paralell robot movement
- High precision weight scale
- Cycle time: 50 sec, 5 types

THANK YOU FOR YOUR KIND ATTENTION!



VT ASYST Kft.
H-8000 Székesfehérvár
Berényi út 72-100
Tel.: + 36 22 533 620
asyst@asyst.videoton.hu



TIPA Kft.
H-9027 Győr
Juharfa út 4.
Tel.: + 36 96 510 940
info@tipa.hu

