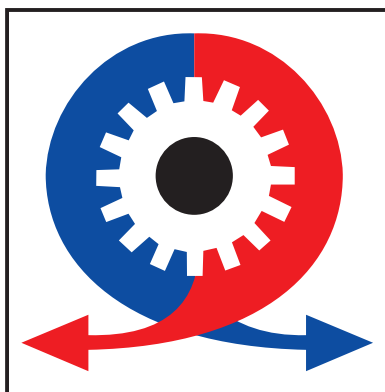


LIST OF NOVELTIES

registered up to 8th September 2017

 ufi
Approved
Event



MSV 2017



AUTOMATIZACE

9.–13. 10. 2017

www.bvv.cz/msv

▶ **ABC3D (Elvira, spol.s r.o.)**

CZ – Praha 4
Hall Z 048

▶ **ProJet MJP 2500**

Professional 3D printer MJP2500 printing models with detail accuracy starting from 16µ in high surface quality independent of the geometric orientation of the model. Absolutely no demand for location and manual finishing works. Quickly and accurately prints prototypes for verification, functional and casting models. Prints on solid plastic, rubber or wax.

Benefit for customers:

He product benefits will be appreciated by all who need quickly made and dimensionally accurate model regardless its complexity. Unlike similar devices this one does not require mechanical removal of supports. The supports may be quickly and automatically washed off without the need for manual intervention and without the risk of damage to the finest parts of the print. The method of the support construction also allows for effective use of the whole built-up area for increased printing productivity and reduced production costs.

▶ **AEROTERM, a.s.**

CZ – Ostrava
Hall E 048

▶ **SOLIDLUX system**

Colour industrial floor surface finish with immediate curing. Application areas: manufacturing halls, chilling and freezing boxes, public areas.

Benefit for customers:

Repairs, renovations, paints of floors, safety floor marking – immediate curing, maximum mechanical and chemical resistance, application with minimum disturbance of normal operation.

▶ **AKAM s.r.o.**

CZ – Brno
Hall C 044

▶ **Series HDR – new generation power sources MEAN WELL with circuit-breaker profile for DIN board**

Device for powering building automation, industrial D&C systems, household management systems, production automation, electromechanical instrumentation and other equipment.

Benefit for customers:

Highly effective sources with low energy consumption under zero load, lean profile (1–4 M), insulation class II, meeting safety regulations pursuant to UL60950-1, UL508, TUV EN 61558-1, EN 61558-2-16, IEC 60950-1 standards, with reference to EN50178, TUV EN60950-1.

▶ **Series HLG & ELG – power sources MEAN WELL with high protection levels IP65/IP67**

Device for powering LED technologies, equipment installed in dusty or wet environments with output regulation option.

Benefit for customers:

Highly effective power sources, vibration-resistant, without ventilator, supplied with different power outputs from 40 to 600 W, different embodiments – with regulation option using internal potentiometer, external regulation, including KNX/DALI interface.

► Series RSD – DC/DC exchangers MEAN WELL for railways

For railway, tramway and bus systems, telecommunication and data applications, industrial I&C systems.

Benefit for customers:

An extended series of DC/DC exchangers 30/60/100/150/200/300 W in a closed perforated box, with high resistance, low profile, passive cooling, in compliance with railway standards EN50155/IEC6057; EN45545-2.

► ALTEG Bohemia s.r.o.

CZ – Poděbrady
Hall A2 033

► ErgoPack 725E

ErgoPack 725E ergonomic pallet taping system with electric drive. Battery supplied. The tightening force and sealing time can be set on the display.

It is used for safe, comfortable, and ergonomic taping of pallets of different sizes, in an ideal upright working position, with no need to run around the pallet thanks to the patented system of a guiding chain that drives the tape under the pallet and then on the other side upwards to the operator's hands.

Benefit for customers:

ErgoPack is ergonomic: no bending, no running around the pallet, reducing the risk of accident, prevents long-term back problems. Easy to operate, rapid operator training. High user safety level. No accidents reported so far for the 8500 systems delivered all over the world. Safer taping, higher profitability, effectivity and time saving. Awarded a gold medal at the international exhibition of inventions in Geneva and the AGR Quality Seal for extraordinary ergonomic products.

► ErgoPack Air 725-580

An ergonomic taping system for pallets placed at height. Battery supplied. Automatic pallet width detection by ultrasound sensors.

Used for safe, comfortable, and ergonomic taping of pallets placed at heights, in an ideal upright working position, with no need to run around the pallet thanks to the patented floating guiding chain system adjustable up to 580 mm. For the taping of pallets on conveyors, lifting tables and trolleys.

Benefit for customers:

ErgoPack system is ergonomic: no bending, no running around the pallet, reducing the risk of accident, prevents long-term back problems. Easy to operate, rapid operator training. High user safety level. Safer taping, higher profitability, effectivity and time saving.

► APJ Praha s.r.o.

CZ – Praha 2
Hall P 089

► Column-mounted drill FLOTT SB 23 PLUS

Drill with stepless speed regulation, control from digital display and touch buttons, power output 25 mm. Drill for metal drilling and thread cutting in manufacturing halls and workshops.

Benefit for customers:

Control of all basic functions by mere four buttons with user-friendly navigation through the menu on the touch screen in connection with a new button/knob switch, LED illumination of the drill head.

► Table-mounted drill FLOTT TBZ 18 PLUS

Drill with stepless speed regulation, power output up to 20 mm, spindle MK II, drill head rebuilding, 230 V. Drill for drilling and thread cutting in workshops and under demanding manufacturing conditions.

Benefit for customers:

Control of all basic functions by mere four buttons with user-friendly navigation through the menu on the touch screen in connection with a new button/knob switch, LED illumination of the drill head.

► Band saw FLOTT HBS 225 A

Cutting up to 250 mm, robust cast iron structure, hydraulic arm lowering, motor 1.1/1.5 kw. Band saw for every workshop.

Benefit for customers:

Robust machine equipped with modern electronics.

► Ar Filtrazioni S.r.l.

IT – Bergamo (BG)

Hall P 156

► Air cleaners for oil vapours and dust on machine tools

Air cleaners for the re-condensation and cleaning of air pollutants arising from machining processes (machine tools, lathes, grinders, lasers, industrial washing machines, etc.) working in three-shift operation.

The cleaners may be used for:

- a) all machine tools – machining centres – lathes – grinders – transfer machines – drilling machines – milling cutters – sharpening machines – electric spark machines – laser machines – pressure casting machines – pressing machines – industrial washing machines;
- b) pollutants: oil fog – microscopic fog – vapours – microscopic dust.

Benefit for customers:

- mechanical filtration of a high efficiency of up to 99.995 %,
- ecosystem friendly: reducing CO₂ emissions
- operator friendly: healthy and clean working environment,
- in full accordance with the strictest directives and safety regulations,
- protection of high-sensitivity machine parts, a warranty of precision and longer life,
- recovery of approx. 80 % of re-condensed oil.

► BEAM ČR s.r.o.

CZ – Jesenice u Prahy

Hall V 191

► Central industrial vacuum cleaner

Used for the cleaning of buildings, or integrated in the manufacturing process. It is used in administrative, commercial and industrial facilities.

Benefit for customers:

- reduced dust nuisance in the manufacturing process,
- more efficient cleaning.

► BOUKAL s.r.o.

CZ – Litvínov - Chuděřin

Hall P 081

► Universal planer Bernardo UWF 130 Servo

Universal UWF 130 Servo planer with horizontal and vertical spindles and a power unit, ideal for precise mechanical engineering production.

Benefit for customers:

A universal planer in desk size, power output 3 kW, with digital measuring and a power unit with movement control for all three axes x, y, z, ideal for its compact size and good price/performance ratio.

▶ Column-mounted drill Alzmetall ALZSTAR 30/S

Professional drill for industrial applications. Made in Germany, material top-standard cast iron, lifespan at least 20 years, application areas: precise mechanical engineering production.

Benefit for customers:

Precise drill for frequent use with long life min. 20 years.

▶ Universal turning machine Bernardo SMART 410 x 1000 Vario with digital measuring

The universal Smart 410 Vario turning machine is designed for light and medium-demand turning with digital measuring on 3 axes with extensive standard accessory range. Application areas: tooling workshops, manufactures, repair shops, school workshops.

Benefit for customers:

The universal Smart 410 Vario turning machine is designed for light and medium-demand turning. The standard equipment (part of supply) already includes all relevant accessories for universal use (a 3-shoe chuck, lunettes, exchangeable wheels for thread cutting, 3-axis digital measuring etc.). this model is supplied with digital measuring on all three axes and speed regulation (up to 3000 rev/min) for comfortable and correct setting of cutting speeds for turning.

▶ CipherLab Co., Ltd.

TW – Taipei

Hall A2 037

▶ RS50 robust touch computer

The CipherLab RS50 series is a new touch computer featuring an excellently balanced ratio between the robustness and a nice shape. The result is a wonderful user impression. The terminal is adapted to the users´ needs in logistics, field applications and warehousing.

RS50 runs under Android 6.0 operating system. It is equipped with a 4.7" multi-touch display, wireless communication, application software and development tools. The computer complies with the IP67 class industrial standard, which is a warranty of the computer´s functionality in any harsh conditions.

Area of application:

- transport and logistics,
- field applications,
- public administration.

▶ 9700 Industrial mobile computer

CipherLab 9700 specially developed for the difficult requirements of warehousing and distribution centres and manufacturing facilities. It features excellent functionality and robustness for versatile use. Model 9700 runs under Android 6.0, Windows CE and Window Embedded Handheld.

Its versatility and the possibility to use 1D or 2D code scanners help users to work effectively. Model 9700 with a keyboard may emulate a standard terminal and adapt quickly to specific needs in various applications. The high number of other added valuable functions and characteristics makes the 9700 series a useful tool for all your requirements for warehousing and distribution centres.

Area of application:

- warehousing and logistics,
- #production.#

▶ **RS31 Mobile touch computer**

The CipherLab RS31 series is designed to satisfy the needs of mobile workers. This intelligent computer with a 4.7" display runs under Android 6.0 and similar to a personal smart phone. It does not require any special user training. The industrial version with a Corning Gorilla Glass 3 display is resistant against water and scratches. Trouble-free communication and cooperation between the workers is achieved by the 4G / LTE technology and easy-to-adjust 802.11 a/b/g/n. RS31 is a fully functional mobile touch computer, designed to the business needs.

Area of application:

- retail,
- health care,
- public administration,
- field applications.

▶ **DT technologies CZ s.r.o.**

CZ – Rokycany
Hall V 123

▶ **Manual DT changer for grips SK 42, 52, 65, 80 and vulcanised grips for index MS 16**

Benefit for customers:

Quick change of vulcanised clamping heads

▶ **EDM 3D s.r.o.**

CZ – Ostrov
Hall Z 007

▶ **Raise 3D N1**

FDM 3D printer with two extruders and 205 × 205 × 205 mm work space. Application areas: schools, construction/mechanical engineering, prototype manufacture, architecture, small-series production.

Benefit for customers:

Basic work space, user friendly control, wide range of working temperatures and print materials, lockable space, remote machine management.

▶ **Raise 3D N2**

FDM 3D printer with two extruders and 305 × 305 × 305 mm work space. Application areas: schools, construction/mechanical engineering, prototype manufacture, architecture, small-series production.

Benefit for customers:

Big work space, user friendly control, wide range of working temperatures and print materials, robust construction, lockable space, remote machine management.

▶ **Raise 3D N2 Plus**

FDM 3D printer with two extruders and 305 × 305 × 610 mm work space. Application areas: schools, construction/mechanical engineering, prototype manufacture, architecture, small-series production.

Benefit for customers:

Super-standard work space, user friendly control, wide range of working temperatures and print materials, robust construction, lockable space, remote machine management.

▶ **EKO - ŠIMKO s.r.o.**

CZ – Náchod
Hall G2 025

▶ **EKO-ST/VIBR integrated extraction table for welding and grinding**

An extraction table with exhaust grating, vibration regeneration of the filter, with an extracted front wall. It is mainly used mechanical engineering for welding and grinding.

Benefit for customers:

Space saving, considerably cheaper against the conventional method used today (separate extractor, separate working table).

▶ **EPPINGER GmbH**

DE – Denkendorf
Hall P 058

▶ **FASTLOCK BMT® – quick-clamping tooling system BMT**

The new tooling system will fix the tool holder by means of a single screw to your lathe revolver guaranteeing the same rigidity you know from the famous BMT system.

Benefit for customers: 4 times faster tool holder exchange, shorter down times and higher productivity.

▶ **EXINCO s.r.o.**

CZ – Brno
Hall B 009

▶ **MAGNUS – shelf for residual sheet storage**

Specialised shelf for effective storage of residual metal sheets up to the size of 1500mm x 1500mm and weight 375 kg. Specialised shelf for organised storage of residual flat materials (sheet metal, glass, plastic, wood, plywood).

Benefit for customers:

Elimination of material damage by storage and perfect visibility of all stored materials, high storage capacity on small floor area, easy handling the residual sheets, robust structure, high bearing capacity and long life.

▶ **MW 950 M3**

Highly sophisticated machine for deburring and sharp edge chamfering of burns in water basin. The deburring machine MW 950 M3 assures high-standard processing of burns of laser or plasma. Perfectly removes sharp burrs of parts cut of sheet metal.

Benefit for customers:

The best possible quality of piece working thanks to the sophisticated management system of the process of cutting in water bath. Perfect surface of all parts regardless the shape complexity, a quick and complex process of grinding, deburring and edge rounding.

▶ **MUFFATO CC 50 R**

Quick mechanical press for automated pressing of small pieces. Precise pressing of small pieces also in fully automated mode. The presses may easily be rebuilt to another manufacturing process, which makes them suitable manufacturers of small product series. The high productivity is given by the advanced construction.

Benefit for customers:

High precision pressing, easy control. High speed of manufacture in automated mode. Low operation, maintenance and service costs. Attractive price and very long life of the presses.

▶ FLP Microfinishing GmbH

DE – Zörbig
Hall V 077

▶ FLP RL 500 rotary lapping machine – a design series of machines for the lapping of rolled workpieces

For fine grinding, lapping and polishing of rolled workpieces.

Benefit for customers:

Optimum removal, easy-to-handle, low adjustment costs.

▶ FLP HIGH PRECISION 540–1300 – a design series of machines with a high-rigidity granite frame

For high precision fine grinding, lapping and polishing on planar and planparallel workpieces.

Benefit for customers:

Temperature stability and vibration reduction by using a granite base frame. Very high rigidity for high precision.

▶ FLP SINGLE PRECISION 380–4000 – a mechanical engineering series for fine grinding, lapping and polishing

For high precision fine grinding, lapping and polishing of planar surfaces, from the machining of single pieces up to large-scale production.

Benefit for customers:

High speed for high production volumes, high precision, modular structure, optional SPS control, optional automation.

▶ HEIDENHAIN s.r.o.

CZ – Praha 10
Hall P 077

▶ TNC 640 with touch screen

CNC control for mould and rotary part milling, for example control of precision and high-performance machining centres in 5 axes simultaneously with a focus on manufacture of moulds with high surface quality, manufacture of complex rotary parts by combined milling and turning technology using inter-operative checks of tool blunting and adaptive move control. To increase cutting performance and to keep surface quality at the same time there are the unique algorithms CTC and AVD, effectively reducing vibrations caused by the machine dynamics.

Benefit for customers:

TNC 640 with touch display uses multi-touch, kinetic page scrolling, Intel CPU with 1.7 GHz and 4GB RAM.

▶ TNC 620 with touch screen

TNC 620 is compact with transparent control – correct control for milling and drilling machines. TNC 620 is a compact but versatile outline control system with up to 5 controlled axes and a controlled spindle. Thanks to its flexible operation concept and scope of performance the system is suitable mainly for milling and drilling machines in piece and serial manufacture, tool manufacture, general engineering, research and development, prototype manufacture and in testing laboratories, repair shops, professional technical and apprentice schools.

Benefit for customers:

TNC 620 with touch screen is controlled by finger touches line a smart phone or a tablet.

The user may move the programming and testing graphics directly on the screen, dynamically, smoothly and tearlessly. The system uses 2GB RAM, CFR in 8GB size, HSCI connection, Ethernet, and USB 3.0.

▶ HIWIN s.r.o.

CZ – Brno - Tuřany

Hall B 037, Hall V 104

▶ CNC laser cutter – FeiCut FCL3015

The CNC laser cutter of Czech origin is equipped with top-standard technology of fibre lasers, IPG. The machine is equipped with linear motors in all axes, HIWIN brand. The machine is suitable for cutting various metal materials including light metals. The machine construction allows for variable dimensions of the work top for sheet formats from 1m x 2m to 2m x 6m.

Benefit for customers:

The high dynamics of drives of all axes allows for high-speed cutting. Low costs of machine maintenance. Variable options of the overall laser workplace arrangement thanks to very compact floor size of the machine, which is one of the smallest on the market. Quick and effective servicing provided directly by the manufacturer's staff from Brno, uses remote online access to the machine.

▶ Hufschmied Zerspanungssysteme GmbH

DE – Bobingen

Hall P 106

▶ Graftor®

Perfect graphite roughing and finishing – in a single working operation – of the highest precision. For the production of filigree electrodes of graphite. Our new Graftor® is equipped for cost-effective graphite working by means of the DIP® diamond coat patented for Hufschmied, with all geometries optimised for graphite.

Benefit for customers:

- a special centre geometry allows for extremely high feed values and first-class surface quality;
- a very low cutting pressure – for the production of filigree centres and bridges without breaking;
- you need only one tool – roughing and finishing with the same tool in one working operation;
- nano-crystal diamond layer for a very long life;
- diameter range D1 = 1 mm up to D2 = 25 mm.

▶ BlockBuster

Perfect Block roughing-finishing in pattern production. The shape-stable Block material provides all possibilities in the production of original patterns, design, styling and cubing patterns and various moulds, foundry tools, core moulds and gauges. The dimensioning of substrate and the geometry are decisive for the tool productivity and performance. Our new BlockBuster is dimensioned for cost-effective metal cutting of all slab materials. All geometries are Block optimised.

Benefit for customers:

- a special centre geometry facilitates 10 times higher volumes in roughing;
- a very low cutting pressure guarantees that the bridges are not ejected and do not get pulled out;
- roughing and finishing with the same tool in one working operation, no pre-finishing needed;
- 18 mm allowance for finishing is feasible;
- excellent chip structure due to a massive reduction of hot temperature choking;
- diameter range D1 = 2 mm – D1 = 25 mm.

► **High-performance tools for hardened steel, new machining product lines of up to 72 HRC**

The target group is the user involved in the production of tools, moulds, machines, equipment and jigs. Now, we offer spherical milling cutters, torus milling cutters and high-feed milling cutters from the diameter range 2 mm to 12 mm.

Benefit for customers:

- the longest life;
- the best tool and workpiece surface;
- the best harmonisation of the geometry, hard metal and steel coat of up to 72 HRC.

► **igm Robotersysteme AG**

AT – Wiener Neudorf
Hall G2 029

► **igm RSX compact system – a compact robotic welding system with a revolving jib arm + manipulator**

A compact design facilitates flexible production on the smallest base area. A full production system which can be equipped with all process equipment and sensor options.

Benefit for customers:

- 1–2 working operations on minimum space;
- you can use it for workpieces of up to 1000 kg;
- you can use all standard welding processes.

► **ILME Spa**

IT – Milano
Hall C 020

► **SQUICH inserts – industrial connection without tool**

For automation, machines, repairment. Vibration proof and temperature changing environment.

Benefit for customers:

- up to +70% higher density with 3–42 poles;
- 50% wiring time for solid, stranded or flexible wires with or without ferrule;
- no need of tool for wiring;
- 10A–16A; 250–830V;
- an Autoshort version for current measurement instruments;
- for all standard sizes housings.

► **E-XTREME – enclosures with highest protection for corrosion**

For Food, Railway, Wind and Chemical industry. Extreme corrosive environment.

Benefit for customers:

- Brief technical characteristics (EN);
- Plasma-Titan coating;
- 3000 h in salt spray test;
- IP65–69K;
- all types and sizes available!

► **IMANPACK PACKAGING & ECO SOLUTIONS SPA**

IT – Schio (VI)
Hall A2 035

► MCWS 9

Piece counting/weighing machine particularly indicated for weighing small and medium size hardware + automatic box and tray forming machine, driven by servomotors. For hardware (small and medium size hardware) such as nails, screws, nuts, bolts, plastic, aluminium casts and miscellaneous small parts.

Benefit for customers:

- possibility of using the machine as a piece counter only, to meet specific requirements;
- possibility of memorising different programmes to suit various products;
- possibility of linking it to other machines (bags, sacks, boxes, KLT).

► MTRF 2000 automatic box and tray forming machine driven by servomotor for hardware

Benefit for customers:

- possibility of forming boxes or trays with hot-melt or by joint;
- adhesive or interlocking box and tray closure options.

► Ing. Zdeněk ŠVĚDA – COLOR SET

CZ – Dašice

Hall A2 041

► Kit system FILIP

The first Czech kit FILIP. Who is earnest, he uses the FILIP system. You can easily make conveyors, workshop furniture (tables, shelves etc.), automated and robotic lines with it. Where the FILIP system can be used: manufacture with large share of hand work, manufacture with longer inter-operation times, light manufacture, electrical industry, warehouses and other specialised work sites.

Benefit for customers:

Replaces welded structures with connection elements and is very resistant to cyclic stress. The connections may be screwed or connected with quick-release couplings. The purpose is that the customer may decide whether compactness or speed of assembly is the priority.

► IWZ Industriebedarf GmbH

AT – Wien

Hall G1 085

► Gneuß MRS extruder; „Jump-Reaktor“

The MRS by Gneuß opens new opportunities for efficient degassing and extrusion of plastic melts. Jump can increase the value of melt IV for the required level. Application range: production of film, Bottle to Bottle recycling, polyester packaging stripes, PE/PP recycling, PA degassing, direct recycling of fibre and film waste.

Benefit for customers:

The MRS extruder based on a conventional one-helix extruder is provided with a multi-helix element in the central part for optimum degassing. The Jump process is a cost-effective SSP alternative because no new heating is needed, and thus you save on energy.

► L & R container cooling unit of up to 5 MW

A compact cooling unit that can be used as add-on. The units of a cooling output from 10 to 150 kW are made for interior installation but as an option they can be fitted for outdoor application.

Benefit for customers:

To the customer's need the cooling units have a single cooling circuit or multiple separate cooling circuits for a higher operation safety.

▶ GfK Dry Wheel – plastic granulate dryer

Application range: small quantities and granulates for prototypes are dried reliably and energy cost effectively. Electric energy cost saving, compact make, can be used the existing equipment.

▶ JAC Coupling Co., LTD.

KR – Busan

Hall A1 014Q

▶ Composite Coupling

JAC-Composite Coupling is designed for installation in Cooling Tower.

- Long distance power transmission without bearing support.
- Overcoming the corrosive environment of the cooling tower.
- Improved lifetime of cooling system by light weight.

Cranes and hoist, Elevators, Generators, Machine Tools, Compressors, Blowers, Press Printing Food industry, Conveyors, Rubber industry, Paper Mills, Steel Manufacture, Rubber industry

Benefit for customers:

- High quality industrial power transmission couplings.
- Efficient performance.

▶ Gear Coupling

- Smaller and lighter than any other couplings.
- Capacity of handling heavy loads.
- Without noise and vibration with high speed operation.
- Good operation in axial misalignment.
- Easy to attach on both sleeve as there are grooves.
- No leakage of urease.

Cranes and hoist, Elevators, Generators, Machine Tools, Compressors, Blowers, Press Printing Food industry, Conveyors, Rubber industry, Paper Mills, Steel Manufacture, Rubber industry

Benefit for customers:

- High quality industrial power transmission couplings.
- Efficient performance.

▶ Grid Coupling

- Quick and easy installation.
- Replace-In-Place design.
- Wearing member of a Steelflex coupling.
- A fraction of the complete coupling cost.
- Tapered grids are accessible through the quickly removable cover.

Cranes and hoist, Elevators, Generators, Machine Tools, Compressors, Blowers, Press Printing Food industry, Conveyors, Rubber industry, Paper Mills, Steel Manufacture, Rubber industry

Benefit for customers:

- High quality industrial power transmission couplings.
- Efficient performance.

▶ Wire drum coupling

- Designed for installation in drum drive of crane and conveying system.
- To be used in the very difficult and rough operating condition of iron and steel work.
- To be used in continuous heavy load operation in shore cranes.

Cranes and hoist, Elevators, Generators, Machine Tools, Compressors, Blowers, Press Printing Food industry, Conveyors, Rubber industry, Paper Mills, Steel Manufacture, Rubber industry

Benefit for customers:

- High quality industrial power transmission couplings.
- Efficient performance.

▶ JC - METAL s.r.o.

CZ – Vsetín

Hall G2 020

▶ LRP-500 light-weight manual positioner – a simple rotating positioner with a modular clamping system is a suitable accessory for welding of parts after stitching in modular welding fixtures

Benefit for customers:

- easy-to-operate by the manual wheel with a handle;
- high variability of the fixture positioning;
- compatible with the 16 system;
- load capacity of up to 5000 kg.

▶ SMP-1500 medium-weight powered positioner with a modular clamping system is a suitable accessory for the welding of parts after stitching in modular welding fixtures

Benefit for customers:

- weldment turning by 360°;
- easy electric control using keys in the switchboard cubicle;
- compatible with the 28 system;
- load capacity of up to 1500 kg.

▶ KARDEX s.r.o.

CZ – Praha 1

Hall A2 013

▶ Remote support for Kardex Remstar

Remote support for monitoring of automated Kardex systems. Thanks to the remote support system Kardex Remstar may monitor automated devices via its portal and the operator may request remote assistance directly from the machine control panel. The system also sends an automatic message if it stops or an error occurs in the course of its operation.

Benefit for customers:

Service interventions may thus be quick and effective and thanks to the remote diagnosis the necessity of the technician's visit is often eliminated. If a technician pays a visit anyway, he comes after optimum preparation for the service intervention.

▶ Karl Bruckner GmbH

DE – Weinstadt

Hall P 058

▶ Dead and live centres, front drivers and special makes

Centres and drivers for lathes and grinding machines. For turning, grinding and driving of top precision.

Benefit for customers:

Pin bars for their production.

▶ KINALI

CZ – Brno
Hall F 096

▶ Robotic “bin picking” system POPELKA

The robotic hand AUBO with integrated 3D camera is able to independently release from warehouse any crate or box. POPELKA fits every modern manufacturing facility targeting fully automated production processes. Wherever two manufacturing nodes need to be interconnected, POPELKA will provide for the half-product transfer logistics.

Benefit for customers:

The product facilitates better utilisation of the human potential by taking over ever repeating activities, such as half-product handling. This need may be addressed by POPELKA, a robot that will never be tired, will always work accurately and reliably, quickly and without demand for wage rise. POPELKA is fully compatible with the Industry 4.0 concept.

▶ Optical quality control based on the artificial intelligence technology

A single-purpose device demonstrating usability of machine vision and artificial intelligence for product quality inspections: 100% product quality inspection, accurate measurement, surface defect detection, check of colours/colour-fastness.

Benefit for customers:

Quick rate of investment return – within one year. Simpler and quicker processes – instead of the time-consuming manual inspections quick and precise computers take the job. The system provides absolute awareness of production status – by statistics and diagrams of progress of manufacture in time with the option to compare production quality between shifts or suppliers.

▶ Telecentric lenses and VICO lighters

State-of-the-art industrial lenses – telecentric, bitelecentric, fixed focus lenses and adjustable shutter. Imaging for the purpose of precision measurements (< 0.01mm).

Benefit for customers:

Perfect image – the VICO lens luminosity is unrivalled. Excellent price/performance ratio – you will get top quality lenses for a price lower than the competitors' prices. A wide selection of models: from those with long working distance (up to 510 mm) to the compact models with the length of mere 75 mm, allowing fitting into a very confined space. They will meet every need – the field of vision up to 300 mm, the focus depth of up to 600 mm, models with adjustable shutter and coaxial illumination.

▶ KINEX

CZ – Praha 9 - Běchovice
Hall F 036

▶ Iconic Space – wireless data measuring and transmission, online control of measuring processes through Cloud Software

Area of application: automation of measuring processes, wireless measuring, recording and control of measured values. Process stability, traceability of values to the last detail.

▶ LASCAM systems s.r.o.

CZ – Praha
Hall G2 037

▶ LASTIC – laser solution for plastics

LASTIC is a new unrivalled solution for plastics. This effective solution is designed for trimming of inlet systems, marking, drilling and welding in plastic industry. The main function of the unit is trimming of plastic inlets, drilling, marking and welding of products in plastic industry. The unit is associated, fully automated and integrated injection press periphery.

Benefit for customers:

- Process acceleration – reduced time of product processing up to 7-fold.
- Increased productivity – in the case of drilling LASTIC is able to drill 7 holes in 0.14 second – in contrast to the former one hole drilled mechanically in 1.2. s.
- Scrap reduction – from 14 % resulting from mechanical processes to 0.02% resulting from use of LASTIC.
- Site unification – thanks to the workstation multi-functionality up to 72 % reduction of service costs, costs of consumables and mechanical working of tools (such as sharpening of cutting knives).
- Automation – reduction of the number of site operators by one half.
- Saves space – LASTIC makes 1/5 of the size of a standard drilling unit or is fully integrated to the conveyor.

► **Cleaning laser – CL 300 with axis 50**

Laser cleaning is a breakthrough technology with regard to effectiveness, cost-saving and environment friendliness. This technology also saves cost of operation energies and consumables. Application areas:

- cleaning of plastic and rubber moulds;
- selective removal of corrosion layers;
- oxide removal;
- cleaning of oil deposits;
- removal of steamed metal layers;
- surface preparation for surface treatment;
- metal degreasing, weld finishing;
- structuring and modification of metal surface;
- removal of organic impurities from plastics.

Benefit for customers:

- Effectiveness and environment-friendliness – this technology has received several environmental awards.
- Contactless treatment of cleaned material for damage minimisation.
- Cheap technology with quick investment return – several proofs that the technology is paid back after one year by cleaning-related operation cost saving.
- Breakthrough technology – perfect surface cleaning by a single pass in cases so far requiring several long cleaning cycles.
- Uniqueness – possibility of selective cleaning and performance variability.
- Stability – top quality German industrial craftsmanship assures longevity and reliability.

► **High-speed cutting system PS 3015**

Premium high-speed laser system by a leading world manufacturer of premium machines HK Laser & Systems. The system is characterised by high productivity and process stability and has obtained several awards such as the *Red Dot Design Award*, *the Good Design Award* and *the iF Product Design Award*. Application areas: High-speed cutting of metal (steel, stainless, aluminium, copper, brass) and non-metal (wood, plastic, leather) materials.

Benefit for customers:

- low energy demand;
- high productivity;
- cutting speed up to 65 m/min;
- high precision positioning ± 0.1 mm;
- large sheet cutting 8096 x 2504 mm²;
- output up to 10 kW;
- cutting under compressed air;
- laser type selection option – CO₂, fibre, disc.

▶ Lintech, spol. s r.o.

CZ – Domažlice
Hall E 013

▶ Lin-Box I universal laser compact station

A practical, compact laser station made in house, designed for quick and precision laser marking. The machine was designed for quick and precision laser marking of metal, plastic or varnished components. It is a compact space-saving laser station. During the design stage, great attention was given to the handling of the objects marked. Therefore, it is possible to quickly place both advertising articles, and various parts for electrical engineering, printed circuit boards, or mechanical engineering tools.

Benefit for customers:

- optimum capacity/price ratio;
- perfect and very quick laser marking;
- flexible, reliable, professional;
- no maintenance, minimum operation costs (energy only);
- long life of components (parts of European origin).

▶ Robotic laser marking system

Based on our cooperation with production automation companies, primarily robots and peripherals for injection moulding presses, our company presents laser marking by collaborative robots that can be used for collaboration with people. Using modern technologies makes the production process more effective and resolves the current problem of all production companies – lack of qualified work force. You can automate nearly anything with a robotic arm and the application of laser makes this technology even more advanced.

Benefit for customers:

Its advantage is flexibility and fast setting, fast processing and a straightforward process. Marking on hard-to-access places. Wide range of application possibilities.

▶ Fully portable, electromagnetic dot peen marking system with accumulator

This machine does not need any supply cable or hose to function. It is equipped with an accumulator, which guarantees 7 hours of operation. It is therefore suitable for the marking of large, hard-to-move objects, such as metal structures, waggons...

Benefit for customers:

- very intuitive control on the panel with a keyboard and display, or through a PC;
- the machine can be used outdoors thanks to its rugged design and metal body;
- 80×50 mm marking field;
- permanent marking, which stays legible after most of surface finishes;
- the electromagnetic pen is a guarantee of precision marking with an adjustable marking depth.

▶ Logentia

FI – Helsinki
Hall A2 006

▶ Logentia – software for optimum transport service selection

Support software for logistics. Software fitting to all companies recommending their products to their customers, such as manufacturing companies, wholesale, retail, e-shops etc.

Benefit for customers:

Tangible reduction of costs of product transport to customers, considerable acceleration of transport ordering paperwork, investment return within one month, connection to ERP, logistic and other systems, orderly transport costs.

▶ **LONTECH - surface treatment, s.r.o.**

CZ – Býšť
Hall G1 017

▶ **IQ EASY anti-static system by SIMCO ION**

A new generation of products for the elimination of static electricity, electrostatic charging or static electricity measuring. The system is mainly used in the production and processing of high-tech products, such as top-quality films for electronic and medical applications or for the food industry where you require a high-efficiency machine with a very small final electrostatic charge.

Benefit for customers:

IQ EASY can monitor all process parameters and adapt instantly its activity for the best resulting efficiency of the charge elimination.

▶ **Rotating air cleaning nozzles by IMM are designed for contactless cleaning of shaped or structured products from dust, chips, fibres and other particles**

They are used for the cleaning of products, such as injection moulded pressings, before varnishing, chip boards after grinding, display boards during assembly, printed circuit boards, vacuum moulded pressings, etc. The rotating nozzles may be combined with SIMCO ionisers to eliminate static electricity.

Benefit for customers:

High cleaning efficiency thanks to intense air pulsing.

▶ **Open Air – atmospheric plasma by Plasmatreat**

It is used as surface pre-treatment before gluing, printing, varnishing, casting of connectors and creating of functional coatings on various materials (plastics, metals, glass, composites) with low operation costs. It is no hazardous for the environment.

Benefit for customers:

High quality adhesion of the connection and coating, in line integration in production lines, low operation costs.

▶ **Max Aicher Bischofswerda GmbH & Co. KG**

DE – Bischofswerda
Hall V 076

▶ **Long-distance waste transport systems**

The Max Aicher system for the reloading and long-distance transport of waste has been used for more than 20 years. It features extraordinary robustness, reliability and operation safety. Application range: in municipal activities, business and recycling. Transport of large volumes of waste to landfills or incineration plants.

Benefit for customers:

Household, hard-to-store and industrial wastes are pressed „as delivered“. Without any pre-sorting or crushing. With the container system, smell and insects are not a big issue and there is no contamination during transport.

▶ **MERLIN Technology GmbH**

AT – Tumeltsham/Ried im Innkreis
Hall A2 014

▶ **MERLIN VISCORE – high-pressure dampening system**

For direct high-pressure dampening of interiors. The system provides the necessary ambient humidity.

Used in the wood-processing industry, production and processing of plastics, electronic industry, food processing, agriculture, paper and printing industry.

Benefit for customers:

Reduction of dust occurrence and static electricity, reduction of adiabatic temperature, higher work productivity, improved quality of the environment, lower employee sickness rate.

▶ **MISAN s.r.o.**

CZ – Lysá nad Labem
Hall P 152

▶ **High-speed machining centre Brother Speedio S700X1 with Feedio automation**

Vertical high-speed machining centre with clamping spindle cone BT30 BigPlus combined with sophisticated automation for serial manufacture. Small- to medium-scale manufacture of small machine parts with high demand for productivity and accuracy.

Benefit for customers:

High quality and reliability of Brother machines for demanding application not only in automotive industry. Automation with CCTV for easy half-product charging. Intuitive controls for quick readjustment to another job.

▶ **Okamoto UGM360NC – universal cutter for cylindrical surfaces**

Digitally controlled cutter with three cutting spindles on a rotary head. Precision rotating parts with external and internal cut surfaces.

Benefit for customers:

Grinding of complex parts per one charge into the machine. Dialogue programming of standard shapes without knowledge of ISO programming.

▶ **Okuma LT2000EX double-spindle, double-revolver turning centre**

Turning centre for productive machining of rotary parts per single machine charge. Application areas: automotive manufacture, connecting elements.

Benefit for customers:

Exceptional thermal stability of the machine, 16-position revolver heads, integrated ejector, preparation for bar feeder retrofit.

▶ **Nabertherm GmbH**

DE – Lilienthal
Hall V 021

▶ **VHT 8 - VHT 500 – retort furnaces with cold walls up to 2400 °C**

The VHT compact retort furnaces are designed as electrically heated chamber furnaces with graphite, molybdenum, tungsten or MoSi₂ heating elements.

Benefit for customers:

A wide variety of heating designs as well as a complete range of accessories provide for optimal retort furnace configurations even for sophisticated applications.

▶ **NA 30/45 - NA 675/65 – chamber furnaces with air circulation < 675 litres, electrically heated**

Based on a very good temperature homogeneity, these air circulation chamber furnaces are suitable for processes, such as annealing, curing, hardening, temper annealing, artificial ageing, pre-heating or soft annealing and brazing.

Benefit for customers:

For soft annealing of copper or tempering of titanium, and for annealing of steel under non-flammable protective or reaction gases the chamber furnaces with air circulation are equipped with a suitable annealing box. Thanks to their modular design the air circulation furnaces may be adapted for process requirements by using special-purpose accessories.

► N 7/H - N 641/13 – electrically heated chamber furnaces

These universal chamber furnaces with radiation heating are designed for highly adverse conditions during heat treatment. They are ideally suited for tooling construction processes and in the hardening shop, such as annealing, hardening or preheating for forging. By using various accessories, the furnaces can be modified for your application.

► NEW BICHEI LED CO., LTD.

KR – Busan
Hall A1 014P

► Fixed LED luminaires

The effect of LED lamp be illuminated widely.

- First, the light be refracted diffusion with varying degree passing through the diffusion Plate.
- Secondary, the light be diffused reflection on the reflector in prescribed angle.

The effect of LED lamp be fixed inside combination. Being fixation style LED lamp which are not the base in structure. This lamp could be prevented from fire accident owing to contact inferiority. Electrical energy will be saved about 74% compare with Metal-halide Lamp(250W).

- Luminous efficiency quality with 103 Lm/W being an efficient product.

Benefit for customers:

- The effect of LED lamp be provided the usability of work. Whenever the work could be used the LED lamp in or outside By connecting an outlet of this lamp directly with the external electric power.
- Lamp cover with PC and chain hanging ring be safe from out of shock.

► NMS CZ s.r.o.

CZ – Praha 9
Hall F 045

► Leica AT403 laser tracker

Leica AT403 is a continuation of the successful AT402. The most important improvements are: dynamic mode, measuring time reduction, better Wi-Fi connection, extended working temperature range from -15 °C to +45 °C. It is a portable system for precision 3D measuring of industrial objects of the size of up to 320 m.

Benefit for customers:

Mobility, light weight, resistance, fastness and simple operation – these are the guarantees of trouble-free and effective use for different applications both in the facility and outside.

► P.E.I. Protezioni Elaborazioni Industriali Srl

IT – Calderara di Reno (BO)
Hall P 080

► Snap Telescopic Cover – a telescopic cover that can be easily dismantled into its components

Cover for protecting frontal and vertical axes in working centres, transfer machines and small to medium lathes and milling borers.

Benefit for customers:

This new cover allows free and instant access for disassembly on the machine tool. Snap Telescopic Cover is made of highly resistant steel and a polyurethane wiper with dimensions up to 1 m width and 4.5 m height, reaching a maximum speed of 150 m/min and acceleration up to 2 g.

▶ "J"-series apron covers, impact tested – roller guards with or without motor

The motorised version is widely used in highly automated work stations and is suitable for separating the operator from the working area and for a rapid change of pieces or tools.

Benefit for customers:

A protective flexible roll-up apron cover which shields the operator from flying chips or tools, impact tested according to norm EN12417.

▶ Pneumat System Sp. z o.o.

PL – Wrocław

Hall V 122

▶ Pneumatic motor M25-3550-TL ATEX

Air motors in stainless steel and lubrication free, unidirectional with a threaded shaft, or reversible with a keyed shaft. The perfect solution for this application is industry of textile, marine, petrochemical, food processing, agricultural equipment, printing machinery, chemical and strapping machinery.

Benefit for customers:

- may be loaded until fully stalled,
- overload safe,
- torque increase at mounting load,
- low installation costs,
- explosion proof,
- operationally safe (dust, gas, water),
- low weight and small size,
- high power density,
- can be sterilized.

▶ Pneumatic cylinder PSN series

Normalized servomotor, made by stainless steel. For pneumatic installation in aggressive environment, food and pharmaceutical industry.

Benefit for customers:

- high resistance to corrosion,
- possibility to make in higher temperature version,
- possibility to make in ATEX version,
- seals for contact with food.

▶ Pneumatic cylinder PSC series

Normalized servomotor, made to work in difficult terms. For work environment in high level of pollution, wood and concrete industry.

Benefit for customers:

- protect from pollution setting on piston rod,
- protect internal seals of servomotor,
- failure-free work in difficult terms.

► **Pneumatic cylinder SLM series**

Rodless servomotor with mechanical coupling. Application with limited count of entrance, requiring high speed of passing, using cartesian system.

Benefit for customers:

- high speed of passing,
- economize space,
- modular construction.

► **Push in fittings „BLUE LINE“ series**

Push-in fittings series manufactured in plastic and nickel-plated brass. All parts are suitable for use with hoses, tubes or pipes made of plastic and copper. Wide range of pneumatic applications.

Benefit for customers:

Low cost and wide range of dimensions.

► **Hoses calibrated with polyurethane**

Hoses calibrated with polyurethane to compressed air. Area of application: cables for supplying actuators for compressed air.

Benefit for customers:

- very elastic (also in low temperatures),
- resistant to abrasion,
- no „memory effect“.

► **Rubber hose Gol Blue**

Rubber hose designed for air. Area of application: gun hoses, also for winding.

Benefit for customers:

- flexibility and lightness,
- resistant to broke.

► **Complete spiral hoses made of polyurethane Classic**

Spiral hoses made of polyurethane completed with quick coupler. Application: gun and taker hoses, made to mounting positions.

Benefit for customers:

Complete solution in the form of a spiral hose, encapsulated in the common quick coupler NW 7.2.

► **Modular solenoid valves 15V**

Modular solenoid valves with D-SUB or Profibus supply unit. Up to 32 valves on one manifold, valve functions fully configurable. For pneumatic automation lines, also ones, that uses vacuum technology.

Benefit for customers:

- lightweight and compact design allows to fit the manifold in small areas and vertical surfaces;
- high protection degree IP67 protects the manifold from heavy duty work environment;
- easy to expand or modify by user;
- wide range of working pressure (-0,99/+10 bar);
- low power consumption 1,3W saves electric energy.

► **Ball valves LYBRA with pneumatic drive**

Closing valves up to 25 bar, made by brass nickel plated with atex option, scope of temperature: -15°C - 90°C. For pneumatic and water installation, non-aggressive media.

Benefit for customers:

- certainty of close - 100% valves are test in fabrics,
- high quality – produced in Europe.

► Brass valves TOTAL

The highest quality valve up to 200 bar is patented in drown system DSS4, which appears for example in an atex, degrease or NTP. Scope of temperature: -20 °C – 130 °C. For gas installation (DU6V gas), water distribution, heating system, petrochemistry and oil, vacuum.

Benefit for customers:

- non-problem working for a long time,
- lack of leakage (100% valves are test in fabrics).

► Stainless steel valves, triple-elements with electric drive

Multi-tasking valves with universal electric drive in threaded version also to welding. For compressed air, water, oils, steam, fuels, solvents and non-aggressive media.

Benefit for customers:

- easy and quick conservation and cleaning,
- possibility of manual overload,
- feedback information about condition of valves (multi-color diode),
- versatility (one drive to scope of tention: 24-240V AC/DC),
- easily electric connection (plugs).

► PRIMA BILAVČÍK, s.r.o.

CZ – Uherský Brod
Hall F 010

► Werth TomoScope® XS

A coordinate measuring machine with sensor for computer tomography (CT). Applications: Measurement and digitisation of plastics, light metals, graphite parts by computer tomography.

Benefit for customers:

Like all Werth CT machines TomoScope® XS too performs reconstruction of 3D volume graphics in real time, the parallel reconstruction in the course of the image acquisition predestines the system for manufacture quality monitoring. Quick amortisation and low operation costs of the new high-precision tubes the Werth CT device TomoScope® XS is predestined for a broad range of tasks in every manufacturing company.

► Faro QUANTUM

A mobile coordinate measuring system, with advanced man-machine interface and improved ergonomics making FARO Quantum virtual extension of human arm. measuring arms are mainly designed for use in the area of industrial metrology.

Benefit for customers:

FARO Technologies introduce a new series of the FARO Quantum arm, further improving the position of the FARO measuring devices in metrology and increasing performance in the manufacturing control process thanks to the best in class parameters, improved ergonomics and extreme portability.

► OMNI microscope

Digital full HD OMNI microscope is an integrated full HD (1080p) digital microscope and measuring system working without a PC.

Benefit for customers:

Omni microscope offers excellent image processing and a control mechanism assuring beautiful full HD live electronic image in the quality of 60 images per second, allowing for use within a wide range of applications including quality control, testing, repairs, accumulation, inspection and documentation. Its unique feature is calibration across the full range of enlargement, distinguishing Omni from the other digital inspection systems.

► PROMINENT, spol. s r.o.

CZ – Kroměříž
Hall F 029

► FISCHERSCOPE XAN 500 – manual analyser of materials working on X ray fluorescence principle

Used in the electrical engineering, mechanical engineering, automotive industry, research and development.

Benefit for customers:

Fast, comfortable, flexible and mobile analysis of materials, including layer thickness measuring.

► S.D.A. s.r.o.

SK – Banská Bystrica
Hall C 008, Hall G2 041

► FERROBOTICS - ACF flexible flange for robots and other machines

ACF keeps contact with the surface with the defined initial force, start-up time, target force and provides position tolerance and contact information. Used in contact-sensitive robotic treatment: sand blasting, polishing, cleaning, laminating, brushing, removal of chips, ironing, positioning, assembly, feeding, testing of parts, gluing, joining, Pick & Place, moulding, packaging, quality control, sand blowing, ...

Benefit for customers:

- perfect fine precision (sand blasting, grinding, assembly...),
- absolute repeatability,
- increased productivity (after ACF application, the production parameters will get better for previously automated processes),
- elimination of human labour and the relating uneven, inaccurate and non-repeatable work results.
- short return period,
- simple change-over to operators, configuration.

► KAWASAKI Robotics - duAro, double-arm SCARA collaborative robot

Space-saving, movable on wheels, easy-to-be-replaced by man in the event of a failure or change of production, simultaneous work with people, fully equipped with security functions for immediate stop, simple programming/training. It is used for assembly in general, assembly of electronic devices, such as cell phones, tablets and others, screwing, spraying, inspections of electronic parts, PCB, coating of seals/adhesives, placing, handling for laser marking....

Benefit for customers:

- simple programming/training, different possibilities, direct learning using a tablet or TP panel,
- one arm with multiple tools,
- application of a camera system on the robot arms,
- change of arm length, customized versions, addition of turning axis – these are standard options.

▶ SEMACO tools and software, s.r.o.

CZ – Jeseník
Hall P 073

▶ VBD Fourworx® milling cutter

A completely newly designed overall geometry. It is optimal for the milling of steel, cast iron and RSH materials, such as titan and Inconel. A milling system of a new concept, suitable both for wet and dry machining.

Benefit for customers:

With Fourworx® milling cutters and tips you can achieve maximum outputs even with less robust machines.

▶ Fraisa NVDS monolithic milling cutter

A patented geometry for HPC & HDC milling. Thanks to their versatility, NVDS milling cutters are suitable for a wide range of applications. They are perfect for annealed/hardened tool steel, as well as for cast iron & titan.

Benefit for customers:

The highest productivity of HPC milling thanks to the double groove geometry and variable torsion.
New possibilities of drilling and round milling.

▶ WorkPLAN production management software

A specifically oriented ERP system for customized mechanical engineering production. Used for tailor-made mechanical engineering production, project-based production, and design studios.

Benefit for customers:

It facilitates automation and management of the project key parts, such as bid pricing, monitoring of calculations, budgets, job management, production capacity control and planning, worked hours and attendance management, quality monitoring, purchasing, warehousing and all the necessary on-line analyses in each project stages. Thanks to the open character of the system and prepared integration you can set up a configuration of the required modules only, integrating them to the existing software portfolio or using the ERP as a comprehensive solution, both for small, middle and large-size companies.

▶ Siemens, s.r.o.

CZ – Praha 13
Hall P 019

▶ Complex solution of digitisation for working and manufacturing machine building

By means of a prototype multifunctional machining centre Siemens will introduce advantages achievable by machine manufacturers when they digitise their operations. The area of machining and manufacturing machines is covered by a complex solution from the first machine design via its construction and commissioning to its servicing.

Benefit for customers:

Digitisation strengthens manufacturing flexibility and performance, reducing costs and product lead time in the process. And all that with preserved or even improved product quality. Thanks to the Siemens solution the customer may improve speed, precision and safety of machines.

▶ Virtual commissioning - digital twin

A solution simulating a functional model working in the virtual environment and faithfully simulating the real manufacturing environment. The digital twin or virtual commissioning can be applied in all industrial areas when machining and manufacturing equipment is constructed, from breweries to automotive.

Benefit for customers:

With the help of the machine simulations the customer may reveal not only software errors but also possible mechanical collisions of the machines. This may replace construction of expensive prototypes and eliminate trouble connected with activation of an already finished machine. Generally speaking, virtual commissioning saves time and money.

► SOLO Swiss SA

CH – Porrentruy
Hall V 035

► Bell-type furnace PROFITHERM P800

Atmosphere heat treatment furnace, exhibits high performance compromise between reachable metallurgical performances (hardness/deformation), load size (up to 750 kg for high temperature applications) and general consumption. Adaptable versions for multiple heat treatment process (carburizing, carbonitriding, hardening, annealing, brazing, etc.) of any types of materials. Suitable for aeronautic, medical and automotive applications.

Benefit for customers:

High precision of treatment thanks to fully monitored process meeting the CQI9 and AMS 2750 standards. Fast and easy loading of the furnace. Metallic muffle that lower the gas consumption. Very adaptable product that can be designed to accurately meet the customer needs.

► Tilting furnaces 1050 °C KN1050-320

Automatic tilting furnace, quenching in oil - smallest automatic quenching device on the market. For precise heat treatment of special parts (small series) and heat treatment of small parts up to 1050°C.

Benefit for customers:

Very fast quenching (normalizing temperature to martensite start temperature < 2s). Low gas consumption.

► SOLO Swiss continuous furnace 302 – conveyor belt furnace with quenching tank

Adaptable versions for multiple heat treatment process (carburizing, carbonitriding, hardening, annealing, brazing, etc.) of any types of materials. Suitable for aeronautic and automotive applications.

Benefit for customers:

Continuous production of up to 350 kg/h in carbonitriding version (case depth 0.1mm) production-integrated technology, fitting the machining flow. High performance isolation that allows for an external temperature reduction of 15°C without using refractory ceramic fibers.

► Sugino Machine Limited – odštěpný závod

CZ – Praha 5 - Zličín
Hall P 087

► Selfeeder Revo SRV2-2-6030 automatic drilling unit

The latest, very compact, precise and powerful automatic drilling unit equipped with a spindle of up to 10 000 rpm offers a stable performance. Thanks to its innovative design it is easy to adapt to the requirements of large-scale production and integration into fully automated production lines. The drilling unit is used for the design of automated production lines primarily in the automotive and aircraft industries.

Benefit for customers:

- high speed drilling,
- high output at low costs,
- very compact make.

► Synchro Tapper Revo SSTR3-H108 automatic threading unit

Synchro Tapper Revo automatic threading units of the high-speed series (up to 3370 rpm) facilitate precision threading. The spindle speed may be adjusted using the speed controller. With an integrated servo drive you can improve the precision and the total threading cycle time. The unit is easy to connect to your universal PLC. It is used for the design of automated production lines, mainly in the automotive and aircraft industries.

Benefit for customers:

- easy to connect multi-spindle threading heads,
- high rigidity,
- threading of up to M22 into aluminium possible.

► Swisstool Export - Gruppe s.r.o.

CZ – Praha 3
Hall P 065

► SCHAUBLIN 125 CCN R-TM / A2 – 4 high precision lathe

A CCN (conventional control numerical) lathe combines the advantages of numerical control and the simplicity of a conventional lathe. Thanks to its precision and rigidity the SCHAUBLIN 125 CCN is predestined for hard turning.

Benefit for customers:

With the same ergonomics the 125 CCN lathe is available in three versions:

- L-T – with linear tool arrangement,
- R-T – revolver and fixed tools version,
- R-TM – revolver and powered tools version.

► TERMETAL - ANDRZEJ ZBOROWSKI

PL – Piekary Śląskie
Hall V 029

► Induction hardening system

Several types of systems with one or double spindle with turntable or dedicated to large gears. For surface hardening of shafts, pins, gears etc. Shafts length 600 mm – 2000 mm, diameter 5–500 mm. Gears (tooth by tooth) up to 1500 mm diameter. Custom designed hardening systems.

Benefit for customers:

High efficiency, repeatability, hardening parameters control, possible automatic loading and unloading.

► Induction brazing system

Stationary or mobile systems, manual, semi-automatic, automatic systems. For brazing of tubes, pipes, flat bars etc. Brazing of copper, brass, steel, aluminium, carbides.

Benefit for customers:

No open flame, direct brazing by induction temperature control, easy to automate.

► Induction heating system

Semi-automatic & automatic systems. Additional material handling systems. Heating before hot plastic working. Heating of billets, bars, bars ends, tubes, flat bars, wires etc. Heating of steel, copper, brass, aluminium.

Benefit for customers:

High efficiency, heating parameters control, repeatability, automatic transport system, adapted to use robotic systems.

▶ TRIBOTEC, spol. s r.o.

CZ – Brno
Hall F 091

▶ PCP cartridge lubrication unit

The PCP cartridge lubrication unit is supplied with a lubricant container for a connecting thread 400g Lube Shuttle or EURO cartridges and with two air supply versions. In PCP 1, the air supply to the pneumatic cylinder is controlled by an electromagnetic pneumatic valve. In PCP 2, the air supply is controlled by a frequency air generator. It is designed for direct lubrication of friction and rolling bearings, single heavy-duty areas and for smaller central lubrication systems with progressive dividers, for stationary and mobile applications.

Benefit for customers:

The lubricant is sucked into the dosing unit of the PCP lubrication unit straight from the 400g Lube Shuttle and EURO cartridges, which are easy and fast to replace so that the lubricant does not get contaminated. The lubricant is then supplied to the lubrication circuit and lubrication spots without any contamination.

▶ Vysoké učení technické v Brně

CZ – Brno
Hall Z 132

▶ Automated nano-deposition site

Laboratory and manufacturing equipment for local repeated raster-arranged chemical and electro-chemical depositions on a 4-inch plate mainly for use in production of non-lithographic nano-structures right on the plate surface in the form of anodic oxidisation or chemical (current-free) or galvanic deposition/modification. Post-processing modification of thin-layer structures such as electrode systems on chips or sensor surfaces, based on directly grown nano-structures in the fully automated mode, prepared for deployment in piece manufacture of micro-parts and at research sites requiring serial production of samples in a repeated procedure or with accurately specified parameter deviations

Benefit for customers:

A fully controlled manufacturing process, high degree of reproducibility, integrated process-related cooling and heating. Accurate location of deposition/modification using a 3D positioner with micro-move <1 µm. A closed production cycle protected against ambient contamination with clean area installation option. Optional creation of repeated manufacturing processes with potential programmed parametric variations "tailor-made" to customer requirement based on more than 1 years of practical experience of the laboratories of the Institute of Micro-Electronics of the Brno University of Technology.

▶ APH-ME 25 PZ burner

APH-M (mechanical fuel-air link) and APH-ME (electronic fuel-air link) are modern types of automated gas burners designed for burning of natural gas, propane-butane and low-heat gases. The burner construction is based on mono-block structure, i.e. the ventilator and all components are part of the burner body. The burners run fully automatically even in unmanned boiler rooms. The continuous thermal output regulation and low air residue after burning assure high economy of operation. The electrical components by established manufacturers are highly reliable and long-life. The burner is specifically designed and developed for hot-water and steam boilers for communal and industrial use.

Benefit for customers:

The burner meets requirements for emission limits defined by Act no 201/2012 Coll. and Government Decree related to it, transposing the requirements for stricter emission limits defined in EU Directive 2010/75/EU on Industrial Emissions of 24 November 2010.

► **Magnetic-rheological shaft seals**

Magnetic-rheological shaft seals use oil-dispersed iron particles, size a couple of micrometers, placed in the sealed gap, as the sealing medium. These particles are chained by action of a magnetic field. The exhibit is a testing device for this type of shaft seal. The magnetic-rheological shaft seals can be used in transmissions, clutches or pumps. However, the major application are is still represented by rotary shaft seals in vacuum devices.

Benefit for customers:

This type of shaft seal provides for hermetic separation of the sealed medium from the surroundings, low loss momentum and relatively high pressure resistance (in bars).

► **Zero-emission electro-hydraulic mini-excavator up to 2 t**

The first development version of a new construction design of 2 t mini-excavator using electric drive with battery powering for work in confined and closed spaces inside buildings and public spaces with requirement for zero emissions.

Benefit for customers:

Reduced energy demand of the machine by application of new energy-saving components
Reduced material-element demand by use of a new composition of the power and control system
Modular design with unified subsystem structure for a wide performance range of the mini-excavators
“Clean” technology assured by application of zero-emission power drive

► **Topologically optimised additively made wheel-carrier for Formula Student – Dragon 7**

Front wheel suspension carriers for Formula Student Dragon 7 by the TU Brno Racing team. Weight 485 g, made by Selective Laser Melting technology, design author: Ondřej Vaverka. Implemented by the Department of Reverse Engineering and Additive Technologies of the Construction Department, Faculty of Mechanical Engineering, Brno University of Technology. The seats are made by S&K Tools s.r.o. The wheel carrier shape was topologically optimised according to the expected maximum load during cornering and simultaneous braking. The optimisation considers transferred loads and materials used (aluminium alloy AlSi10Mg) to achieve the lowest possible part weight. The optimised shape was made by the additive technology of Selective Laser Melting.

Benefit for customers:

Topological optimisation in combination with the additive technology of SLM allows for manufacture of components with minimum material consumption for the parts to withstand the required load. The same approach may be used for shape optimisation of other parts for automotive and aircraft industry where weight is of essence.

► **Mobile tester of automotive shock absorbers TriTec2**

The mobile tester of automotive shock absorbers TriTec2 is characterised by low production costs and high mobility. Its unique construction in combination with a new diagnostic algorithm assures quick and precise analysis of the automotive shock absorber condition without the necessity of its dismantling from the vehicle. Application for diagnosis of automotive shock absorbers in and outside car repair shops without the necessity of the shock absorber dismantling. Designed for passenger cars with maximum weight per wheel 650 kg.

Benefit for customers:

A small, simple and affordable tester not requiring under-floor installation, quick and easy measurement in and outside the car repair shop, unique construction combined with a new evaluation algorithm for accurate specification of car shock absorber condition.

► **High-temperature atomic source (Ga, Ag, Au, Si, ...)**

The device produces a beam of atoms (Ga, Ag, Au, Si, ...) with thermal energy (0.1-1 eV) under ultra-high vacuum conditions. These beams of atoms are ideal for production of metal (semiconductor) nano-structured surfaces. The device is used for deposition and study of interactions of atomic bundles with the surface. Material

atoms with high-temperature saturated vapours ($T < 1300\text{ }^{\circ}\text{C}$) are mainly used in semiconductor industry where these materials and their alloys in the form of ultra-thin layers or nano-structures perform a unique role in construction of functional parts of microelectronic and optoelectronic equipment. The device may be used under high and ultra-high vacuum conditions.

Benefit for customers:

The device will permit deposition of thin and ultra-thin metal and semiconductor layers under high and ultra-high vacuum conditions. the device generated intense oriented low-energy atomic beam (0.1-1 eV).

► **High-frequency dissociation source of hydrogen, oxygen and nitrogen atoms**

The device performs dissociation of two-atom gas molecules (H_2 , O_2 , N_2 ,...) using high-frequency electromagnetic field (13.56 MHz) under high vacuum conditions. The resulting atoms with thermal energy (0.1-1 eV) are formed into an intense oriented atomic beam for use in preparation and modification of ultra-thin layers and nano-structures.

The device is designed for deposition and study of interactions of the atomic beam with the surface. The dissociated atoms of two-molecule gases (H_2 , O_2 , N_2 ,..) are mainly used in semiconductor industry with high potential in development of semiconductor (GaN, InN, AlN, ...) and insulating layers (SiO_2 , Al_2O_3 , HfO, ZnO ,....). In addition the low energy ($E = 0.1\text{--}1\text{ eV}$) and high reactivity of these beams of atoms allows for low-temperature surface cleaning/modifications.

Benefit for customers:

- Obtaining intense and oriented beam of hydrogen, oxygen or nitrogen atoms under high-vacuum conditions;
- Low-temperature surface cleaning;
- Surface modifications by interactions with the beams;
- Preparation of semiconductor and insulation layers (GaN, SiN, SiO_2 , HfO,...).

► **High-temperature dissociation source of hydrogen atoms (H_2)**

The device performs dissociation of two-atom hydrogen molecules H_2 under high temperatures of $1800\text{ }^{\circ}\text{C}$ and high-vacuum conditions. The oriented beams of hydrogen atoms with thermal energy (0.1–1 eV) are used in ultra-thin layer preparation and modifications.

The device is designed for study of interactions of the atomic beam with the surface. The dissociated atoms of two-molecule hydrogen gas are mainly used in semiconductor industry, where they may be applied in low-temperature surface cleaning. In addition the low energy ($E = 0.1\text{--}1\text{ eV}$) and high reactivity of these beams of atoms allow for changes of growth modes during deposition and thus modify the resulting properties of the prepared surfaces.

Benefit for customers:

- Obtaining intense and oriented low-energy hydrogen atom beam;
- Low-temperature cleaning of semiconductor surfaces under ultra-high and high vacuum conditions;
- Modification of growth and surface by hydrogen atoms.

► **HV chamber for gas sensor study**

The device measures transport properties of sensors under defined conditions. In addition the whole device is compatible with atomic microscope (SPM) by NT-MDT, which allows for study of sensor surface during its operation. The device is mainly used for development and testing of microelectronic gas sensors.

The combination of the scanning probe microscopy (SPM) with definable gas atmosphere allows for obtaining very detailed information about physical processes on the sensor surface. For example surrounding atmospheric condition effect on the potential distribution on near atomic level can be studied.

Benefit for customers:

Possibility of development and testing of gas sensors and their detailed study focused on the physical processes taking place on their surface during measurements.

► Multifunctional semi-operational unit for waste gas and combustible pollutant reduction

The unit is variable, mobile and focused on short- and long-term testing of jointless and bulk catalysts under laboratory and operation conditions. The testing may be focused on new types of catalysts or on testing of known catalysts under known industrial conditions. The unit is primarily designed for use of jointless catalysts for elimination of various pollutants, but after removal of the sophisticated insert for the monolith installation also bulk catalysts with firm catalytic bed may be tested.

Benefit for customers:

Unit applications:

- Catalyst testing for supplier and design companies;
- Significant reduction of investment risk by catalyst testing before operation launch;
- New catalyst type testing;
- Deployment under unfavourable conditions possible;
- Compactness and easy transport to the test location;
- Application variability;
- Easy operation.

► Pneumobil Javelin – racing monopost with compressed air drive

A student project focused on pneumatics with the aim to design a racing vehicle with maximised performance and most effective use of compressed air energy. The project uses both standard and tailor-made pneumatic components.

Benefit for customers:

A unique project with real output increasing student awareness of pneumatics. The students learn how to work with pneumatic elements and how to save energy through the project. The project cooperation with manufacturing companies is another great benefit of the project.

► Quick magnetic-rheological damper

Semi-active automotive vibration damper with time response below 1.5 ms. The damper is fit for semi-actively controlled vibro-insulating systems.

Benefit for customers:

The damper is able to change damping up to ten-fold in less than 1.5 ms. Use of semi-active algorithms for damper control may substantially reduce vibration transfer.

► Semi-automatic device for ocular background sensing

A device performing retina sensing with automatic setting of lighting intensity and focusing. The main application areas include ophthalmology (sensing of ocular background and diagnosing on the basis of image data), secondary use in the area of bioelectric safety systems (individual recognition by retina of his/her eye).

Benefit for customers:

The main benefit distinguishing the device from other devices (fundus cameras) is represented by automatic setting of lighting intensity and automatic focusing of the ocular background, including corrections of dioptric eye defects.

► Design of agricultural tractor Haart Spectre

A design of a heavy agricultural tractor with innovative design, using alternative drive with regard to operation economy. Diploma thesis of Radim Horáček at Construction Institute of the Faculty of Mechanical Engineering of the Brno University of Technology 2015.

Awards: nominee in the Industrial Design category – National prize for student design 2015; Prize awarded by the head of the Construction Institute, Faculty of Mechanical Engineering, Brno University of Technology – National prize for student design 2015; 1st prize in Industrial Design category – Design Talent, Zlín 2016.

Application area: agricultural machine manufacturing.

Benefit for customers:

A tractor with characteristic shape whose concept outlines potential future development of agricultural technology with emphasis of maximum versatility, compactness and environmental operation. The tractor design uses unconventional drive system with four traction power units in the wheel naves and flow batteries. Another important element is the integrated system of contra-weight allowing for optimum weighing of the tractor as currently needed. The progressive design is based on accurately defined sharp shapes referring to the power and might of the tractor.

▶ WALMAG MAGNETICS s.r.o.

CZ – Kroměříž
Hall F 011

▶ Elmag compact

Electromagnetic clamp for flat grinding with oval poling. Application area: flat grinding.

Benefit for customers:

Time-tested construction in innovated variant, better discharge of magnetic force to the clamp edges in contrast to the original version, milled body with 100% water tightness, multiple leak protection, clamping force 130N/cm², possible interconnection of several clamps and control by a single unit, clamp adjustment on client request, Czech-made – with service and technical support.

▶ Mastermill

Electro-permanent clamp with square poling for milling. Application areas: heavy milling, grinding, drilling.

Benefit for customers:

High clamping force 170N/cm², optional use of pole extensions and machining from five sides. Czech made, service and technical support, optional non-standard magnet adaptations. Considerable time saving in workpiece clamping, low power consumption (only magnet switching on and off), minimum magnet heating.

▶ NEO BUX 300

Permanent load magnet. Application areas: handling metal materials, flat and circular.

Benefit for customers:

Time saving, safer handling, simplified work, load test, dustproof variant, every product is tested with an air gap. Flat and circular load handling. Higher bearing capacities of load magnets, with the same weights and sizes. Increased operation safety, safety coefficient 3 is the minimum achieved via the air gap of 0.1 mm.

▶ Neomill compact

A mechanically switched magnetic clamp for milling, clamping force 160 N/cm². Application areas: milling, drilling, shaving, heavy grinding from fine to coarse pieces.

Benefit for customers:

A pole plate newly made of one piece of steel, for absolute compactness and integrity. In contrast to the standard composite construction of the pole plate the lamella loosening cannot occur and the plate cannot disintegrate. The unique construction improves magnetic force distribution in the clamp surface up to the very edge. The increased limit of usability of the pole plate, not common on the market, is now extended over 10 mm. Service bridge for timely pole plate replacement, reduced overall weight of the clamp, for decreased machine load.

▶ Neostar compact

Permanent mechanical clamp for turning and circular grinding. Application areas: turning and circular grinding.

Benefit for customers:

A compact pole plate of one piece of steel, for turning of the front and the inside and the outside diameter by a single clamp, optional central drilling, high clamping force 140N/cm², optional T-grooves and pole extensions.

► Werkzeug - Eylert GmbH + Co. KG

DE – Chemnitz

Hall V 079

► EYL-TAPMAXX Set Grease Dispensers for Screw Taps

Grease dispensers with a magnetic or screw-on base plate for all machine tools. For the cleaning of tools and subsequent grease feeding to the screw taps.

Benefit for customers:

Life extension (more than 300%), prevention of tool breaking, improvement of the safety of screw tap production.

► Wonjin Industry Co.,Ltd.

KR – Busan

Hall A1 0140

► Cooler for Die casting mold

Using special brazing technology

- no defect and no leak;
- no rust and blockage by using SUS304.

(The cooler is needed to ease the separation process by injecting water into the molds to cool them down, thus decreasing the defect rate, enhancing productivity, and prolonging the durability of the molds).

Die casting moulds

(The car engine part is made of aluminum and the melting point of aluminum is 660 °C which is why the cooler is needed. During the process injecting aluminum, The molds still maintain the temperature. So, the cooler is put together with the die casting mold and it needs water inside for using. Water here functions as a cooler to make the product possible to separate from the mold That helps reducing error rates and expanding the life of the mold).

Benefit for customers:

- completely watertight and flawless;
- excellent durability;
- high quality.

(Thanks to the company's special brazing technology, the cooler is completely watertight and flawless).

► Exchangeable head reamer AHK1-V

Flat seat taper shank reamers. Roundness of 5 m Standard program from 8 to 40 mm in hard alloy. Possible to choose other cutting materials and special modifications. For reaming in all types of materials. Finely adjustable versions suitable for very tight tolerances.

Benefit for customers:

High performance thanks to roundness accuracy.

Fast and easy cutting head change saves set-up costs.

Adjustable version for multiple fine finishing.

Finely adjustable version that can be set for tight tolerances.

▶ WRH Global CZ, s.r.o.

CZ – Praha 10
Hall A2 014

▶ Eltex flexION R60 – discharging electrode

Flexible free-standing spring emission tips, voltage 5 kV, AC. Application areas: in a number of industrial areas where electrostatic discharge elimination is desirable, including but not limited to manufacture and processing of plastics.

Benefit for customers:

Highly efficient electrostatic discharge to small and big distances from the product surface.

▶ Eltex Smart Discharging System – discharging electrode SDS

Technology 24 V, DC. The source, the output and the measurement are located in the electrode body. Application areas: in the fields where electrostatic discharge elimination is needed, especially in automation technology, in plastic manufacture and processing and in packaging industry.

Benefit for customers:

Highly efficient electrostatic discharge to medium distances from the product surface.
Electronic reporting of system functions and failures.

▶ ZARGES CZ, s.r.o.

CZ – Brno
Hall V 120

▶ Mobile platform staircase

Inclination angle 45° or 60°, step width 600 mm, 800 mm or 1000 mm, height 400–5250 mm. Mobile platform for comfortable work at heights. Ideal for long-lasting activities with tools and frequent changes of the workplace.

Benefit for customers:

Light-weight, stable, safe, in conformity with ČSN EN ISO 14122.

▶ Standing ladder R 13

80 mm deep steps with R 13 surface and drainage openings, platform 300 × 250 mm. Designed for work at heights (warehouse, operations, production facilities, etc.).

Benefit for customers:

Safe work with the highest possible anti-skid protection when used in slippery environments.

▶ Case K 411 for the storage and presentation of samples, tools and instruments

A representative case offering a wide range of applications.

Benefit for customers:

Reliable protection of sensitive contents during transport and warehousing.

▶ ZLÍN ROBOTICS

CZ – Slušovice
Hall C 003

▶ Mecademic, MECA 500 unique miniature industrial robot

A miniature robot featuring an unrivalled repeatability of 5µm. The robot may be used for various tasks: inspections and testing, material handling, micro assembly, precision insertion, gluing and varnishing, and 3D printing.

Benefit for customers:

- 5 µm repeatability,
- 0.5 kg load capacity,
- 25 cm reach.

Save space - MECA 500 will virtually fit into your palm, its size is miniature, with a controller integrated in the robot base.

Get precision – with a 5 µm repeatability you can automate micro-precision handling and positioning.

Get control – thank to which you can integrate the robot into your systems and production lines easily.

► **Techman Robot, TM5-700 unique collaborative robot**

A precision collaborative robot featuring a repeatability of 0,05 mm and an integrated camera system. The robot may be used in various applications: precision assembly, inspections and testing, part handling, intelligent recognition and picking of parts by using an integrated visual system, gluing and varnishing, tasks requiring man-robot cooperation.

Benefit for customers:

- first-class repeatability of 0.05 mm, load capacity of up to 6 kg;
- integrated camera system for object recognition, finding of its position, bar code scanning, colour classification, etc.;
- easy & fast integration, no encoding; you can complete a visually guided Pick & Place operation in 5 minutes.

► **ŽĎAS, a.s.**

CZ – Žďár nad Sázavou

Hall V 100

► **Drawbench mounted pipe cutting saw**

A drawbench mounted pipe cutting saw of 400 kN is designed for the cutting of pipes of 16–45 mm in diameter, 5.5–16 m of input length and 150 mm of input curving to production lengths, removal of flashings and edges. You can cut up to 3 pipes simultaneously in a fully automatic mode.

The mounting of the saw on the drawbench facilitates instant cutting of drawn pipes to production lengths and removing of flashings and edges. The saw layout makes it possible to cut pipes to commercial lengths. The saw is designed to cut up to 3 pipes simultaneously. It is designed to cut pipes of the strength of up to 900 MPa, pipe diameter of 16–45 mm, tip length of 150–300 mm and maximum pipe length after drawing of 16 000 mm (depending on the bench type).

The saw is mounted on the drawbench, where the flashings removal takes place, too. The pipes are fed to clamps and container by gravity. The system requires only limited space and can be mounted on an existing drawbench.

Benefit for customers:

Compared to the existing cutting on a separate workplace these are the benefits:

- elimination of the operator´s hard work when sorting the pipes,
- elimination of the operator´s hard work when evening the pipes during cutting,
- reduction of existing number of workplaces for pipe cutting, and consequential cutting of labour expenses.

Status as of 8th September 2017.