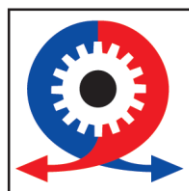
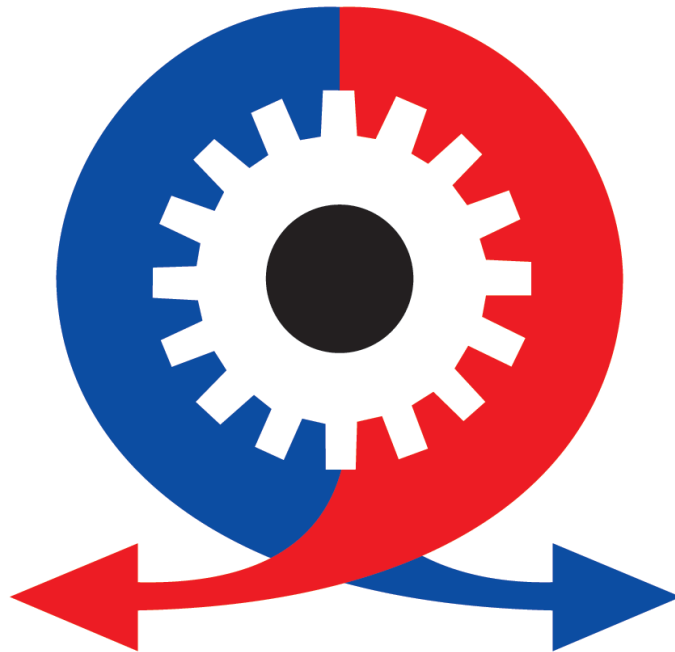
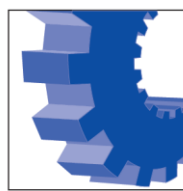


# LIST OF NOVELTIES

registered up to 10<sup>th</sup> September 2018



MSV 2018



IMT 2018



October 1–5, 2018

[www.bvv.cz/msv](http://www.bvv.cz/msv)

## **3M Česko, spol. s r.o.**

CZ – Praha 4

**PAV V 098, VP A2-0 003**

### **■ 3M™ Aura™ 9300+Gen3**

Respirator of the third generation

#### **Area of application**

Aura™ respirators of the third generation bring comfortability and safety corresponding to the needs of various industrial branches.

New improved Cool Flow™ Comfort valve facilitates higher air flow, reducing the heat generated inside the respirator and thus making it easier to breathe.

#### **Customer benefits**

The new braided strips are designed to feature a long life and provide better comfortability, while the two new fixtures on the upper and bottom panels of the respirator, along with the possibility to take it by the valve make it easier to fix the respirator.

### **■ 3M™ Silver cutting and grinding wheels**

These wheels contain precision-formed grinding grains in the form of miniature triangles designed to break as they get worn off and get new super sharp points and edges all the time that will sink into the metal as a knife, instead of just scraping it or disintegrating it. Therefore, the wheels offer a much longer life than standard ceramic grinding wheels.

They leave a clean cut with minimum burrs.

#### **Area of application**

The grinding wheel is designed for complex metal removing grinding, removal of old paints from stainless steel, soft steel, aircraft steel and other materials.

The cutting wheel is suitable for fast cutting of metal pipes, bars and sheets.

#### **Customer benefits**

The grinding and cutting wheels feature an unprecedented price/performance ratio. They are used for fast and consistent surface treatment when grinding. Their cutting qualities are unparalleled in this product group.

### **■ GPH series 3M™ VHB™ Universal tape for high temperatures**

A new generation of VHB tapes by 3M can replace mechanical fixing elements. This new double-side acrylic foam tape offer a high initial adhesion and adaptability. The tape has outstanding heat resistance and perfect adhesion.

#### **Customer benefits**

Precise, easy, reliable and strong bonding of materials. The 3M VHB tapes offer many possibilities for the removal of rivets, screws, clamps and welds, thus improving the technical make of sets, visual quality and work productivity. VHB tapes feature unrivalled strength and improve the total durability and reliability of all bonds.

## **4dot Mechatronic Systems, s.r.o.**

CZ – Brno

**PAV B 051**

### **■ 4dot system for the monitoring of the tool condition at forming presses**

A new Industry 4.0 technology for remote diagnostics of the tool and bearing condition on a forming press model.

### **Area of application**

A new tool for predictive maintenance and increased productivity of forming machines used for forging, pressing, rolling machines and other, and for machine tools and other industrial machines.

### **Customer benefits**

Planning of service interventions, elimination of unplanned downtimes, reduction of maintenance costs and higher productivity and longer life of the machines.

## **ABB s.r.o.**

CZ – Praha 4

**PAV P 093, PAV P 095, PAV Z 029A, VP F 002**

### **■ IRB 14050 single-armed YuMi®**

The single-arm collaborative robot Yumi is compact, light (its weight is only 9.5 kg) and can be installed anywhere any way, including the ceiling, a table or a wall. Thus the robot is easy and flexible to install in existing production lines. The robot is made of light magnesium alloy and can rotate around seven axes. This enables it to imitate human moves with more swiftly than standard 6-axis robots.

### **Area of application**

This version was designed specifically for assembly of small parts and meets requirements for high process flexibility in electronic or consumable manufacture and generally in SME processes.

### **Customer benefits**

Like its dual predecessor this robot uses intuitive and simple guide and teach programming. This simple programming in combination with the flexible installation options represents a significant factor allowing manufacturers replace human workforce where skilled staff is missing and make robotic solutions accessible to new potential robot users, especially the SMEs.

### **■ FlexInspect – Robotic cell IRB 1200**

A new series of standardised 3D robotic inspection systems for precise and effective 3D measurement. The cells are conceived for maximum performance at optimum use of available space.

### **Area of application**

Every production stage (prototyping/pre-production/production start up/routine manufacture) has specific measurement requirements. This is a universal solution responding to the needs of most customers.

The robotic inspection system compares the measured geometrical data with digital CAD models for automated inspection of produced parts.

### **Customer benefits**

This is a universal solution responding to the needs of most customers.

This system significantly reduces the measurement cycle time, increases quality and reduced error rates of inspections.

The system is conceived as user-friendly and requires no specific operator skills.

### **■ RB 6700 with software superstructure Remote welding power pack**

A practical example of the ABBRobotStudio software package with Remote Laser Welding PowerPac superstructure – i.e. a robot IRB 6700 with application of remote laser welding with scanning optics. Remote Laser Welding PowerPac software package is integrated in the ABB RobotStudio – the programming environment for robots by ABB.

### **Area of application**

A universal system ideal for welding of various materials in automotive and other industries.

### **Customer benefits**

The system allows for easy programming of a robot and a laser head from a single shared environment, from the first simulation to the final fine-tuning.

The synchronisation is immediate, without the need of any other software or manual synchronisation (for example the simply change of welding speed in laser welding on the go can be complicated in the case of other solutions).

Fine-tuning of welding parameters can be done in the FlexPendant (the manual control panel of the robot) where the operator stands right next to the processed part.

#### ■ First remotely connected painting bell RB 10000i with painting robot IRB 5510

##### **Area of application**

Painting of parts and bodywork in the automotive industry.

##### **Customer benefits**

The first in the field remotely connected robotic painting bell with sensors checking paint quality and diagnosing the device status in real time. This solution accelerates painting and reduces the defect rate virtually to zero. Thus car manufacturers can focus on optimisation of paint quality in real time instead of the demanding inspection after the painting completion.

#### **ACRIOS Systems s.r.o.**

CZ – Ostrava – Zábřeh

PAV Z 105

#### ■ ACR-2S0-L-002

Double-channel impulse sensor with LoRaWAN interface

##### **Area of application**

Collection of data from energy meters (water meters, electricity meters, gas meters, calorimeters) or other data based on impulse generation (monitoring of industrial processes).

##### **Customer benefits**

A summary of energy consumption in separate parts of building or premises and timely detection of defects (such as water leakage).

A summary of the conditions of industrial processes.

Cost saving compared to wire bus bars thanks to data transmission using the LoRaWAN wireless technology.

Data security thanks to the possibility of building a private LoRaWAN network (the data does not need to leave the local network).

#### ■ ACR-MB-L-002

Converter from the M-Bus wire bus bar to the LoRaWAN wireless technology

##### **Area of application**

Collection of data from energy meters (water meters, electricity meters, gas meters, calorimeters) or other data available through the M-Bus interface.

##### **Customer benefits**

A summary of energy consumption in separate parts of building or premises and timely detection of defects (such as water leakage).

Cost saving in data transmission using the LoRaWAN wireless technology.

Data security thanks to the possibility of building a private LoRaWAN network (the data does not need to leave the local network).

#### ■ ACR-MDBR-L-002

Converter from the RS485 wire bus bar to the LoRaWAN wireless technology

##### **Area of application**

Monitoring of industrial processes through the RS485 bus bar or collection of data from meters supporting the RS485 bus bar (water meters, electricity meters, gas meters, calorimeters).

### **Customer benefits**

A summary of energy consumption in separate parts of building or premises and timely detection of defects (such as water leakage). A summary of the condition of industrial processes. Cost saving compared to wire bus bars thanks to data transmission using the LoRaWAN wireless technology. Data security thanks to the possibility of building a private LoRaWAN network (the data does not need to leave the local network).

## **ADASH spol. s r.o.**

CZ – Ostrava

**PAV C 036**

### **■ ADASH A3800**

A3800 is an online monitoring and diagnosing system. The compact size of the A3800 unit facilitates its placing on the DIN bar in the distribution box. The A3800 unit has an optional number of independent AC and DC input channels - 4, 8, 12 or 16. It means that a 4 channel configuration can connect AC and 4 DC channels. Depending on the number of active input channels we can use 1–4 independent TACHO inputs.

#### **Area of application**

Diagnosing and servicing of machines.

A wide range of application in all industrial areas for important machines and systems with the requirement of minimum unplanned downtimes.

#### **Customer benefits**

Optional full control of the machine operational conditions in an online mode, including history of trends.

Optional automatic evaluation of occurring defects, including warning.

You get the time to plan repairs – minimum occurrence of unplanned downtimes.

Detailed analysis of the machine operational condition in the analyzer mode available on the ethernet.

Minimum unnecessary service interventions and control of the repairs done.

### **■ ADASH VA5**

VA5 is a high-end instrument for measuring in the area of vibration machine diagnostics. It is resistant (IP65) and loaded with functions, such as analyzer, data collector, recorder, thermal camera, balancing, start-up and run-out measuring, ultrasound, acoustic measuring, bump test, operating wave form module, lubrication control, vibration signal listening and camera.

#### **Area of application**

Diagnosing and servicing of machines.

A wide range of application in all industrial areas for important machines and systems with the requirement of minimum unplanned downtimes.

#### **Customer benefits**

Optional full control of the machine operational condition using the round mode of data collection.

Optional use of the FASIT expert system for automatic detection of machine failures.

You get the time to plan repairs – minimum occurrence of unplanned downtimes.

Minimum unnecessary service interventions and control of the repairs done.

## **Advantage-fl.cz s.r.o.**

CZ – Praha 10

**PAV F 079**

### ■ OTEC SF2

Stream finishing machine – deburring, rounding, polishing with automatic workpiece exchange

#### **Area of application**

Industrial production

#### **Customer benefits**

The machine complies with the high standards of process reliability, process speed and quality required by large-scale production. The completely newly developed SF product line guarantees short process times, simple process automation and safety. It gives a very high gloss.

### ■ OTEC CF 18

A machine for fine machining on the principle of a turning disc

#### **Area of application**

An effective process for finishing in a large scale.

#### **Customer benefits**

The effect of centrifugal forces acting on workpieces and the grinding material generates a very intense machining process, which may be up to 20 times more efficient than traditional vibrators. In a wet finishing process, a mix of water and a compound is continuously added and extracted, taking with it the residuals of the removed material. This assures a clean and corrosion free surface of the workpieces.

### ■ Alicona InfiniteFocus

A measuring instrument for surface roughness and roundness

#### **Area of application**

The range of measurable surfaces is almost unlimited. Optional measuring with a high resolution, high repeatability and high precision.

#### **Customer benefits**

The range of measurable surfaces is almost unlimited. Optional measuring with a high resolution, high repeatability and high precision.

## **AEROTERM, a.s.**

CZ – Ostrava

**PAV E 041**

### ■ HandStar / LineStar / FloorStar

A series of devices for curing of UV cured floor paints

#### **Area of application**

Lining, floor marking, anti-slide finishes, paints and reconstructions of floors and staircases in industrial halls and residential houses

#### **Customer benefits**

Maximum mechanical and chemical resistance, application with minimum disturbance of routine operation, without solvents

## **AGME Automated Assembly Solutions**

ES

**PAV V 017**

### ■ AGME RA-UC Riveting head unit

AGME RA riveting heads are highly efficient machines that solve most assembly needs: from forming small rivets to obtaining large riveted heads with different geometries.

### **Area of application**

Designed to be integrated into special assembly machines and can work in any position: horizontal, vertical or inclined. They are different models to obtain perfect riveted heads with 4 to 30 mm diameter. They can incorporate automatic greasing systems and quality assurance systems to control the riveting process.

### **Customer benefits**

The 4th generation of AGME RA riveting machines get perfect riveted joints with very little effort. Significant improvements in design, finish and performance, as well as in durability, reliability and ergonomics.

Modular design that makes multiple combinations possible and ensures a total flexibility to adapt the riveting heads to the production requirements of the automotive components industry.

## **ALTEG Bohemia s.r.o.**

CZ – Poděbrady

### **PAV A2 036**

#### **■ ErgoPack 725E**

ErgoPack 725E ergonomic system for electric-driven taping of pallets. Battery charged. You can set the tightening force and welding time at the display.

#### **Area of application**

For safe, comfortable, ergonomic taping of pallets of various sizes, in the ideal upright position, with no need to run around the pallet. This is possible thanks to a patented system of a guiding chain, guiding the tape under the pallet and then on the other side upwards to the operator's hand.

#### **Customer benefits**

ErgoPack is ergonomic: no bending, no running around the pallet, reduced risk of injury and prevents long-term back problems. Simple control, fast operator training. A high safety level for the users. No accidents reported for the 8 500 systems delivered globally so far. Safer taping, higher returnability, efficiency and time saving! Awarded the gold medal at the International Exhibition of Inventions in Geneva and the AGR Quality Seal for extraordinary ergonomic products.

#### **■ ErgoPack Air 725-580**

Ergonomic taping system for high-standing pallets. Battery charged. Automatic pallet width detection by using ultrasonic sensors.

#### **Area of application**

For safe, comfortable, ergonomic taping of pallets of various sizes, in the ideal upright position, with no need to run around the pallet. This is possible thanks to a patented system of a floating guiding chain adjustable to up to 580 mm. For the taping of pallets on conveyors, lifting tables and trucks.

#### **Customer benefits**

The ErgoPack system is ergonomic: no bending, no running around the pallet, reduced risk of injury and prevents long-term back problems. Simple control, fast operator training. A high safety level for the users. Safer taping, higher returnability, efficiency and time saving!

## **ARGO-HYTOS s.r.o.**

CZ – Vrchlabí

### **PAV V 155**

#### **■ LubCos H2O+ II Oil humidity sensor**

A stationary sensor for continuous monitoring of hydraulic and lubrication oil condition, humidity and temperature.

### **Area of application**

Stationary and mobile hydraulic applications not only in automated plants

### **Customer benefits**

Cutting operation costs by using the Predictive Maintenance service:

- you avoid unplanned downtimes
- better planning of servicing
- long life of the machine
- longer interval for oil replacement
- improved safety for the machine and the operators
- timely detection of contamination by other liquids

(The software for the recording and imaging of measured values is available for downloading at our web site free of charge).

### **■ OPCount Portable particle counter**

OPCount is a counter of particles in the oil, which can be used both for stationary and mobile applications, offering the quality of a laboratory analysis.

### **Area of application**

It is designed for nearly any application in industrial branches, such as hydraulics, the pharmaceutical industry, aviation or quality management.

OPCount may be used in a laboratory or in the field to measure samples from a bottle, container or pressure pipeline.

### **Customer benefits**

Continuous monitoring of machine processes and prevention of premature failures and subsequent damages.

Servicing and maintenance optimization.

The integrated printer offers the possibility to get a hard copy of the measuring results right on the spot.

All the necessary accessories may easily be placed onto the counter or in a robust transport case for easier handling.

### **■ HIT Hybrid tank**

The hybrid tank intelligently combines two production techniques – centrifugal casting and injection moulding.

### **Area of application**

Integrated tanks for mobile and stationary applications requiring the most effective usage of the oil space.

### **Customer benefits**

The filter body is part of the tank.

Other functions, such as oil level gauge, ventilation filter, filling and extraction sieve and connection of sensors, are integrated.

The Quick Connect system for fast and faultless connection of hoses without using any tools.

The complex geometry of the tank may be tailor-made for each application.

A favourable price for the number of functions compared to traditional tanks.

### **■ PRMX2-06 Proportional control valve designed for explosive environments**

A new line of proportional control valves for explosive environments in modular and built-in make. A unique design, which through the phenomenon of a low available electric output implements high transmitted hydraulic forces.

### **Area of application**

Raw material exploitation industry (crude oil, coal)

Petrochemical and food processing industry.

Zones with hazardous occurrence of particles causing explosion initiation.



### **Customer benefits**

Robust design tested to 10 Mio. cycles including sealing.

Built-in slide valve distribution boxes with flexible case seating to compensate for the changer imprecisions – the slide will not get blocked.

High oil temperature and ambient temperatures as a standard.

Surface protection 500 h to ISO 9224 as a standard.

A special make of the slide with locking.

Emergency bayonet control – approved for all modular and built-in versions.

Coils exchangeable between the modular and built-in versions for explosive environments.

### **■ Proportional control valve with digital electronics and internal feedback**

A directly controlled proportional control valve with integrated digital electronics (OBE), proportional control, slide feedback and process feedback.

A control valve with an assembly drawing of the body to ISO 4401, DIN 24340 (CETOP 05)

#### **Area of application**

A typical application for proportional control valves may be feeders and holders of material, forming machines, such as pipe benders, etc. These valves are characterised by pioneer design, high reliability and stability potentiated by good dynamics.

#### **Customer benefits**

High hydraulic power and smooth regulation characteristic.

Increased resistance against vibration and mechanical shocks.

Optional valve connection to the CANopen bus bar.

Optional improved surface protection for mobile applications by zinc coating and corrosion protections 520 h in NSS to ISO 9227.

## **ATES spol. s r.o.**

CZ – Rožnov pod Radhoštěm

**PAV A2 037**

### **■ Unique, flexible, telescopic and configurable conveyors**

Conveyor systems in loading, unloading and handling of bulk materials

#### **Area of application**

Application in distribution and logistic centres, warehouses and manufacturing halls, and further in sorting, packaging ...

#### **Customer benefits**

Increased productivity of loading/unloading and handling by up to 50 %, quick service and spare part supply, long and extensive experience in correct product design and solution for particular operations, successful seek for cost saving, effectiveness increase, occupational safety improvement, and work simplification for the site manager.

## **AXA CNC stroje, s.r.o.**

CZ – Hořovice

**VP P 004**

### **■ AXA VHC 3 – 1760XTS 50**

A high-efficiency machine for five-side full 5-axis machining

#### **Area of application**

Production to order as well as serial production, five-side workpiece machining, continuous 5-axis working

## Customer benefits

Extensive configurability according to customer need

## Bierther Submikron GmbH

DE – Bretzenheim an der Nahe

### PAV E 017

#### ■ LPS 700

A profiling system for lapping wheels

#### **Area of application**

Single-wheel lapping machines

#### **Customer benefits**

Dressing and profiling of lapping wheels on a lapping machine without the need for the wheel dismantling. Elimination of the time needed for mounting and sending the wheel for cutting.

#### ■ ELAP 700

A single wheel machine for fine grinding, lapping and polishing

#### **Area of application**

Watch making and jewellery production, metal cutting, sealing equipment, hydraulic equipment, medical devices, aviation and astronautics, the chemical industry, optical devices, making of moulds and metal sheet moulding/punching, and the automotive industry

#### **Customer benefits**

Machining of high precision and flat parts of a flatness better than 1 µm

#### ■ Composite polishing and lapping wheels

Machining of metal, ceramics, carbon materials, glass

#### **Area of application**

Improved polishing results, better flatness achieved in shorter machining times.

#### **Customer benefits**

An alternative to polishing pads, better polishing results, better flatness achieved in shorter machining times

## BOUKAL s.r.o.

CZ – Litvínov – Chuděřin

### PAV P 081

#### ■ Universal cutter Bernardo UWF 130 Servo

A universal UWF 130 Servo cutter with a horizontal and a vertical spindle

A cutter with a power unit, ideal for engineering manufacture

#### **Area of application**

Precise mechanical engineering

#### **Customer benefits**

A universal cutter with work table sizing, 3kW output, digital measuring and a power unit, regulation of moves of all three axes x, y z, ideal for its compact size and the price/performance ratio.

#### ■ Column-mounted drill Alzmetall ALZSTAR 30/S

A professional drill for industrial use, made in Germany from the top-class cast iron

Drill life min. 20 years

#### **Area of application**

Precise mechanical engineering

### **Customer benefits**

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

### ■ Universal lathe Bernardo Compact 400 with digital measuring

Universal turning lathes Bernardo Compact are supplied in their modern variant fully meeting requirements of modern operations of all kinds.

#### **Area of application**

The basic equipment of the lathe includes all relevant accessories (3-axis measuring, lunettes, LED lighting of the machine, safety features pursuant to CE standard, ...) thanks to which the machine is universal and usable in teaching workshops as well as for tool manufacture and for repair shops.

## **Böhner-EH GmbH**

DE – Burghaslach

### PAV V 130

### ■ EH-D

Servo-actuator; electrohydrostatic actuator

#### **Area of application**

- electrical linear unit, power as per hydraulic – up to 10 MN with a positioning accuracy of 1 micron.
- usable in all industrial areas and testing field with higher requirements on the accuracy of the physical measuring units force and stroke; pressing, bending, cutting, stamping, clinching, riveting, cupping; blow moulding machines, brake testing machine, food machine

#### **Customer benefits**

Individual control of force-stroke profiles; exact process overview possibilities; highest energy efficiency and low operation costs; very silent; virtually maintenance and wear-free; sealed system; usable regardless of installation position; very precise positioning, very compact

## **EKO – ŠIMKO s.r.o.**

CZ – Náchod

### PAV G2 005

### ■ Work table

A work table for grinding evacuation and door corner welding

#### **Area of application**

Mechanical engineering – welding, grinding – above all

#### **Customer benefits**

Space saving

### ■ Aspirator SOS FB 8000.S/6/RO/PTF

In the WINTER/SUMMER variants

#### **Area of application**

Mechanical engineering – central welding – above all

#### **Customer benefits**

Space saving

## **Electroforming s.r.o.**

CZ – Nové Město nad Metují

### PAV V 021

### ■ Seamless precise masking templates and general covers

The method of manufacture of these engineering components uses additive technology of electroforming of copper or nickel materials.

#### **Area of application**

Metal masking templates are designed for applications in the area of surface finishes, especially painting, vacuum steaming and dusting.

These precise covers are usable in precise optics and in detector sets.

#### **Customer benefits**

The additive technology of electroforming permits production of metal parts otherwise hard to produce, with strict requirements for low dimensional tolerances or extreme quality of inside surfaces. Further advantages include small-series production with low cost of repeatedly usable models and extensions needed for the electroforming technology based production.

### ■ 2D electroformed precise parts (zooms – fissures)

2D electroformed structures of copper or nickel made by additive technology permitting production of complex shapes or precise openings of complex shapes with high requirements for dimensional tolerances. Other technologies can hardly meet requirements for such precise dimensions with so low tolerances and so high quality of opening edges.

#### **Area of application**

The main areas of application include precise optics (especially microscopy), as well as various types of detectors using optic principles.

#### **Customer benefits**

The parts may be produced in small series without the need for special tool production and with all types of surface finishes including gloss or even deep black matt.

### ■ GalvanoPhoto

Our “Patent pending” technology permits production of brand new product types on the basis of concept/construction change and introduction of CAD/CAM in the electroforming process. The metal object is made by additive technology of electroforming based on the prepared matrix. The products are faithful prints of the matrix with controllable selected material parameters or layer thickness.

#### **Area of application**

Our “Patent pending” technology is mainly designed for production of 3D metal photographs based on relief formation. Another possible area is prototyping and serial production of selected articulated parts without the need to produce pressing tools.

#### **Customer benefits**

Prototyping and serial production of selected complex articulated parts without the need to make pressing tools or milling complex relief shapes (such as design panels).

## **ELTECH Slovakia spol. s r.o.**

SK – Dolné Orešany

**PAV B 017**

### ■ Eccentric press JL21-45

Eccentric press with tonnage 50 t made by the experienced Italian manufacturer MA.TE Presse

A portfolio of presses with open and closed stands and tonnages from 50 t to 400 t

#### **Area of application**

Our eccentric presses are popular in the area of small-scale material processing by cutting, punching, bending and drawing.

The presses are equipped with all standard accessories for manual as well as fully automatic operation

### **Customer benefits**

Our eccentric presses are outstandingly robust and compact, feature standard accessories for high comfort of work and are usable universally.

Already the standard equipment of the presses includes:

- Press ram in four guides with eight contact surfaces,
- Continual setting of the number of strokes with the help of a frequency exchanger by Siemens/ABB,
- Eccentric shaft with semi-automatic stroke setting,
- Motored rebuilding of ram height,
- Hydraulic overload protection,
- Electronic ram position sensor and 1 control input /feed control etc./,
- Fully automated central lubrication with adjustable and controlled lubricating oil flow, level and pressure,
- Table plate,
- Anti-vibration seating /4 pieces/.

### **■ Electronic roller feeder MA129.3**

An electronic roller feeder for tape width of 300 mm by the experienced Italian manufacturer of ELMEA press automation

The automation portfolio includes winders, levellers, feeders, feed levellers and shears for scroll weights up to 26 t, tape widths up to 2 m and tape thickness from 0.2 mm to 12 mm.

#### **Area of application**

Our roller feeders are designed for dynamic and very accurate tape feed into forming press tool. The feeder standard equipment already includes all needed functions for full utilisation in automated pressing lines.

#### **Customer benefits**

Our machines for pressing automation (winders, levellers, feeders, feed levellers and shears) provide high comfort by extensive standard equipment, universal usability and easy operation.

### **■ Compact winder with leveller S11OL + MR19**

A compact winder with hydraulic expansion and a leveller for tape width of 300 mm by the experienced Italian manufacturer of ELMEA press automation

The automation portfolio includes winders, levellers, feeders, feed levellers and shears for scroll weights up to 26 t, tape widths up to 2 m and tape thickness from 0.2 mm to 12 mm.

#### **Area of application**

Our machines for pressing automation are designed for unwinding, levelling, high-precision feeding and cutting of tapes in dynamic production lines in cooperation with mechanical or hydraulic presses. The machines are equipped with all needed standard functions for full usability in automated pressing lines.

## **FENIX MACHINES SP. Z O.O.**

PL – Częstochowa

**PAV Z 016**

### **■ CNC Grinding Machine FENIX SZK-3**

CNC grinding machine designed for grinding castings of complex shapes made of various materials.

Machines are equipped with diamond grinding wheels, linear conveyor, fenders of control panel, and dedusting systems.

#### **Area of application**

FENIX SZK-3 CNC grinding machines are manufactured on the specific orders and are designed for the specific casts what helps to obtain the best times of machining which are necessary for massive production.

### **Customer benefits**

Hi-tech solution providing precise shape of the processed casting, high effectiveness, elimination of human work, neutral impact on the environment, appealing price, technical abilities, variety of usage.

## **Franz-Kessler GmbH**

DE – Bad Buchau

**PAV P 069**

### **■ B Axis**

MINI 1AT/ SVS-711.625

5-axis lathes with very short spindles for turning and milling. Spindles: MT100S/L/H s QCC (exchangeable rotor group)

Other possibilities for the C axis through a modular system.

### **■ Powered spindle**

V line V100-A20-703.677

Multi-purpose, for 3-and 5-axis machining.

Modular, system, QCC, dialogue, electric release unit. The new V-line spindle facilitates a faster rotor replacement, reducing the total costs for spindle replacement and the machine downtime. No electric engineer is needed.

## **HUPL CZ s.r.o.**

CZ – Bílovec

**PAV Z 105**

### **■ Abrasive water jet machining**

At present our company has been involved in research and development of machining by abrasive water jet with the aim to develop an AWJ technology based tool prototype, its control software, utility model – implement for 3D head rotation and a proven technology – We would like to present outputs of this research activity at the trade fair as part of Smart Innovation. This device enjoys international impact in the field of machining.

### **Customer benefits**

Our specialisation in composite material machining is our response to the emerging technologies in the automotive and railway industries where steel and iron parts are being increasingly replaced with lightened composites. The resulting reduced vehicle weight in effect reduces its fuel consumption.

## **Idra S.r.l.**

IT – Travagliato (BS)

**PAV Z 002**

### **■ Cold Chamber Die Casting Machines OL CS**

New Idra die casting machine CS series with different closing force ranges suitable for the requirements of all customers.

### **Area of application**

Continuing the IDRA reputation for innovation and development, the OL CS takes 70 years of industry experience and condenses it in to one package designed for all light alloy foundries worldwide, providing an answer to their needs and their latest production requirements.

### **Customer benefits**

New OL CS series gives excellent performance of the injection, combining high dynamic force with strong intensification for final pressure and complete flexibility of setting to give precise, stable production parameters. High integrity components for the automotive sector, including structural and power train, can be produced with the highest guaranteed quality and productivity.

### **■ Inject Computer 3.0 HMI**

IDRA new die casting machine HMI with gesture control, suitable for the Industry 4.0 development.

#### **Area of application**

The new IC3.0 allows a full turnkey integration for the automation: each peripheral can be integrated in to the machine HMI. Idra offers a complete service for turnkey cells, for which there is one central hub for setting and saving the process parameters including robot programs, furnace, thermoregulators, trim press, pin marking and other devices installed in the automated cell.

#### **Customer benefits**

3D Diagnostics and intelligent help features simplify the interface for machine operators and process technicians allowing single point setting for the whole cell and intuitive process control of the casting parameters.

Secure Solid State data storage & retrieval for the production and die info in the harsh foundry environment.

Selection from a choice of intuitive icons to help the operator and technicians learn fast and be productive quicker. Idra have listened to the requests of the customers and realised a modern environment familiar to everyone.

## **igm Robotersysteme AG**

AT – Wiener Neudorf

### **PAV G2 036**

### **■ igm Robotic welding system RTE 400**

igm Robotic welding system, Type RTE 498-S

#### **Area of application**

A compact robotic welding system for MIG/MAG welding, working radiuses of welding robots igm from 1500 to 1900 mm, subject to variant

#### **Customer benefits**

The extremely compact structure of this robotic system enables flexible manufacture on minimum floor area. The optional installation of the basic slab even permits the whole device relocations within the manufacturing hall. Despite this the system is a full production system which may include all options of processing technology and all needed sensors.

## **KarT Spółka z o.o.**

PL – Białystok

### **PAV G1-I 113**

### **■ Li-ion Battery Holder**

Li-ion 18650 Adjustable size battery holder – Honeycomb Layout

#### **Area of application**

Alternative power sources and electrical power accumulation.

#### **Customer benefits**

Custom size, area optimized battery sets.

### ■ **INDUSTRIAL DRYER SV 1000**

Dryers and low-temperature kilns SV

#### **Area of application**

Dryers and low-temperature kilns are used for drying, vulcanisation, surface layer hardening, granulate drying, blaze-ups of electrical components and pre-heating of various materials before further processing and for thermal processing of materials such as artificial ageing of aluminium and aluminium alloys, and other materials in the plastic, rubber, automotive, electro-technical and foundry industries.

#### **Customer benefits**

- The kiln chamber features extra long life, mechanical resistance and corrosion resistance
- Horizontal circulation of inner atmosphere assures even temperature distribution inside the kiln
- High-standard insulation material reduces operation costs of the kiln, low external dimensions and low weight of the equipment
- Low service demands and potential other untypical adaptations thanks to the simple modular structure and a technically uncomplicated but efficient and reliable system of inner atmosphere heating and circulation by means of a central heating and fan unit

### ■ **INCINERATORS LZ**

Specially designed LZ furnaces for laboratory incineration

#### **Area of application**

The LZ incinerator is ideal for oxidisation of the charge and ash level tests as well as for other applications requiring sufficient fresh air intake and atmosphere exhaust from the furnace.

#### **Customer benefits**

- Subject to furnace inside temperature the number of air exchanges ranges between 6 and 12 exchanges per minute
- The strong oxygen flow supports the oxidisation process
- LZ incinerators are specially designed for work with the oxygen flow at high temperatures
- To achieve even temperature distribution the air is pre-heated before entering the furnace

### ■ **REFRACTORY CONCRETE SHAPE BRICK**

Refractory concrete brick shapes by LAC are used in many industrial branches. The company has built especially strong reputation as supplier to metallurgy and manufacturers of wood, pellet and biomass boilers.

#### **Area of application**

The application area of refractory concrete brick shapes is extremely broad and includes:

- Energy boilers, waste incinerators, heaters
- Ferrous and non-ferrous metal foundries
- Ceramic and silicate industries
- Glass works
- Chemical and petrochemical industry

#### **Customer benefits**

- Refractory concrete brick shapes are dimensionally accurate and stable within the whole operation temperature range
- The applied technology allows for wide shape variation not achievable by press moulding
- The moulds are much cheaper than press moulds and therefore usable for small-series production
- Large and heavy blocks can be produced for quick thermal plant building
- The biggest advantage is considerable acceleration of refractory lining application or repairs



- Correct application assures considerably longer life of refractory brick in comparison to standard refractory materials

## LASCAM systems s.r.o.

CZ – Praha 7

**PAV G2 040, PAV Z 029A**

### ■ **B Mark AB-F 20W 3D in station**

Laser marking station with 3D head

#### **Area of application**

Marking of metals and plastics and other materials with uneven surfaces • 3D head • station with motored axes X, Y and Z • possible integration into manufacturing line

#### **Customer benefits**

Reduction of costs of product holders and product handling tools thanks to the 3D head with variable focal point. Software with advanced functionalities. High precision, variability of the marked materials and low operation costs.

### ■ **Needham N32HS**

CIJ inkjet printer

#### **Area of application**

High-speed marking of a wide spectrum of materials. Application areas including industry and food processing.

#### **Customer benefits**

High-standard machines with low acquisition costs. A broad selection of inks with different properties and colours. Modern low-maintenance technology for problem-free operation. High-speed micro and multi-line marking.

### ■ **FS 3015 Fiber 3 kW**

Cutting laser by global manufacturer HK Laser & Systems

#### **Area of application**

High-speed black steel, stainless, aluminium, brass and copper sheet cutting.

#### **Customer benefits**

Advanced technology of laser cutting by HK Laser & Systems permits accelerated cutting speed, higher precision, improved productivity and quality. The pleasant design and remote control offer comfortable control by the users.

## Lenzkes Spanntechnik GmbH

DE – Lüdenscheid

**PAV V 032**

### ■ **Multi-Quick MQ60S + MQ100S**

A mechanical quick-release clamping system with a flat forged clamping base and a lever of noble alloy steel with double settable clamping range. Available in long and short variant for fixation to machines with t-groove and threaded holes.

#### **Area of application**

For fixation of workpieces to milling machines and machining centres, mostly for the purpose of heavy machining.

For fixation of workpieces and moulds in plastic injection pressing, forming and pressure casting.

#### **Customer benefits**

- Long life thanks to high-quality material

- Clamping range and height variable and continually settable
- Big tightening forces with low torque
- High clamping forces thanks to the improved clamping lever to turning point ratio
- Shortened clamping time thanks to simple handling

## Lintech, spol. s r.o.

CZ - Domažlice

**PAV E 002**

### ■ **Compact laser station Lin-Box**

The Lin-box laser station in in-house design is made for quick and precise laser identification of metal, plastic or painted components.

#### **Customer benefits**

Indelible laser marks, contactless technology, laser gravure, maintenance-free system with minimum operation costs, long life of components used (thanks to European origin)

### ■ **Micro impact systems**

Electromagnetic and pneumatic variant

#### **Area of application**

Quick mechanical marking highly resistant against external effects

#### **Customer benefits**

The technology transfers letters, numerals, graphic logos or 2D codes

### ■ **Compact laser head**

A compact laser head with cover for integration

#### **Customer benefits**

- A stationary and safe laser head
- The head can cooperate with a robot
- Safety class 1
- Easy integration thanks to compact size

## Maschinenfabrik Berthold Hermle AG

DE – Gosheim

**PAV P 045**

### ■ **Machining centre Hermle C 650**

5-axis machining centre for workpieces up to 3000 kg in weight

#### **Area of application**

C 650 is dimensioned in the proven modified portal variant by Hermle with the bed of cast mineral material. The integrated solid clamping table in the 3-axis variant is able to accept workpieces up to 3000 kg (1050 x 900 x 600 mm) and is therefore predestined for production of tools, moulds and engineering products. The circular rotary table in the 5-axis variant permits high-precision machining of max. 1500 kg (∅ 900 x 600 mm) workpieces.

#### **Customer benefits**

High precision, 3-axis and 5-axis variants, high workpiece weights up to 3000 kg, long accuracy, made in Germany, broadly available service in the Czech Republic, most up-to-date control technology, digital units for industry 4.0 use.

## MAXION Jänsch & Ortlepp GmbH

DE – Pößneck/Thüringen

### PAV V 150

#### ■ MAXION BS 35

A high-performance column-mounted drill with a universal display and interface for thread drilling and cutting

#### **Area of application**

Drilling, countersinking and cutting threads in steel, stainless steel and cast iron for singular use as well as for use in automated production lines, also robotic. Continuous move

#### **Customer benefits**

- High production quality
- Easy programming
- Universal move with changeable engagement

Simple maintenance

## MCAE Systems, s.r.o.

CZ – Kuřim

### PAV A1 001

#### ■ ATOS 5

High-speed 3D scanner with exceptional measurement speed and accuracy – measuring speed up to 100 images per second, corresponding to 0.2 second per scan. Measured data quality is demonstrated by sharpness of the smallest details, for example in the case of measurements of small radiuses or lined edges of sheet metal pressed pieces.

#### **Area of application**

A high-speed scanner for most demanding metrology applications in the automotive and aircraft industries, developed for use in demanding industrial conditions. The scanner can be used for a wide range of manual and automated measurement applications covering all sorts of measured subjects from tools and moulds via casts and models to plastic and metal pressed pieces.

#### **Customer benefits**

End-to-end 3D measurement for complex control of part geometry revealing any part shape defects, for maximum acceleration of time to market.

Higher resistance to unfavourable ambient light conditions, short exposition time, high resolution and quick data transfer

#### ■ Desktop Metal Studio System

3D metal print for office environment: Studio System is a three-part solution of metal 3D print automation. Thanks to cloud software integration the system offers trouble-free printing process of complex metal parts in-house, from digital set to sintered part.

#### **Area of application**

DM Studio system makes metal parts of clean shapes with resolution and accuracy required for functional prototyping. The system provides access to 3D printing to global manufacturers, constructors and technicians. The system represents a substantial step forward in the area of product development and marketing, entailing significant cost reduction and considerable increase of speed, safety and quality of 3D printing.

#### **Customer benefits**

Studio System is up to ten times cheaper than comparable laser systems. It represents a unique 3D metal printing system bringing cost effectiveness to construction teams involved in prototyping. Studio System introduces to 3D print a wide range of major alloys including stainless steel, copper and instrumental steels. Unlike traditional 3D metal printing processes, the Studio System does not

use any hazardous powders, lasers or cutting tool handling and simplifies the 3D metal printing process overall.

## **Misan s.r.o.**

CZ – Lysá nad Labem

**PAV A1 004, PAV P 132**

### ■ **Compact turning centre Okuma Genos L2000e-M**

A new turning centre with a single spindle, one revolver head and a NC horse.

#### **Area of application**

Production of high-standard turned parts with drilled and milled elements

#### **Customer benefits**

A compact CNC centre at an affordable price featuring high reliability and simple control

### ■ **High-speed turning and milling centre Brother Speedio M140X2 with Halter automation**

A vertical turning centre with milling option and a flexible automation system Halter LA20-U

#### **Area of application**

Serial production of precision machinery parts in high productivity.

#### **Customer benefits**

A complex automated site with quick and easy rebuilding for a new product

### ■ **Universal CNC grinder for cylindrical surfaces Okamoto OGM250UNCIII**

CNC grinder for finishing operation on outside and inside cylinder surfaces

#### **Customer benefits**

A universal grinder with intuitive dialogue programming for everyday accurate work

## **Mitsubishi Electric Europe B.V.**

CZ – Praha 5

**PAV P 134**

### ■ **MELFA RV-2FR robot**

The newest generation of Mitsubishi's 6-axis robots together with iQ-R PLC, servo motors and inverters shows enhanced functionalities of preventive and predictive maintenance.

#### **Area of application**

RV-2FR is 2 kg payload and 500 mm reach articulated robot designed for fast and precise assembling, quality control and loading applications. It belongs to the latest FR series of MELFA robots. The FR series gives outstanding performance and quality but also enhanced capabilities of both, preventive and predictive maintenance.

#### **Customer benefits**

Sophisticated algorithms based on AI are able to provide information not only about regular maintenance periods. They show also estimated lifespan of key components. But the most important function is predictive maintenance – possibility to recognise faults of mechanical parts before they will break. All together it allows better planning of the maintenance and eliminates unexpected production stops.

### ■ **CNC M8 Series**

High productivity, usability and flexibility delivered by breakthrough performance.

The next-generation CNC M800/M80 Series empowers the manufacturing industry with unlimited possibilities and the capability to create innovative value.

### **Area of application**

Experience the revolutionary high-speed processing of the new CNC-dedicated CPU - Incorporating the CNC-dedicated CPU in the new series not only results in phenomenal processing speed, but also reduces the number of required parts, leading to fewer possibilities of failure and increasing product quality. Equipped with Mitsubishi Electric's first-ever CNC-dedicated CPU, the long-awaited M800/M80 Series is the fruit of an original development process and the sum of our latest technologies. With the utmost confidence, we are proud to introduce the M800/M80 Series and invite customers to experience performance of the future today.

### **Customer benefits**

**ADVANCED DESIGN** – The advanced construction and sophisticated flat profile take machine design to the next level.

**INTUITIVE USABILITY** – Smartphone-like intuitive touch operation

**UNIQUE CUSTOMIZATION** – A high level of screen customization is attainable more easily in a shorter period of time.

**SUPPORT FOR AUTOMATION** – Supports increasing automation needs. Automation can be realized more easily by simple connection and control of the peripheral devices.

## **MORETTO S.p.A.**

IT – Massanzago PD

**PAV G1 065**

### **■ DPK**

DPK is a continuous loss-in-weight blender that solves the problem of overdosing.

### **Area of application**

DPK: Solving the problem of overdosing

Moretto's DPK is the newcomer of the already large family of Moretto's dosers – solving the problem of overdosing with an extremely precise control.

A compact loss-in-weight additive dosing unit, suitable for intermittent or continuous dosing of small quantities of color or additives into a flow base material.

Thanks to the exclusive vibration immunity system, the machine control algorithm and the hopper removeable from the dosing unit, DPK achieves a dosing accuracy up to  $\pm 0,03\%$ , allowing processors to avoid unnecessary wastes of expensive additives.

DPK is strongly characterized by his hopper, made of transparent acrylic material that allows the operator to see the state of the machine at any time and at long distances.

Furthermore, its integrated feeding system autonomously manages the loading of the material, according to the needs of the processing machine.

### **Customer benefits**

Maximum precision up to  $\pm 0,03\%$

Quick change of material

Immediate visualization of the masterbatch

### **■ X COMB**

X COMB Flexible dryers.

X Comb represents the latest addition to the range of high performance mini-dryers for dehumidifying small batches of technicals materials.

### **Area of application**

X Comb mini dryer with the X HoneyComb technology, inherits the unique advantages of the XD and X MAX dryers, with Dew Point performance up to  $-52\text{ }^{\circ}\text{C}$ . Designed to meet the needs of the most demanding sectors such as the medical sector, it guarantees maximum efficiency and reliability thanks to the zeolite technology, the powerful turbocompressors, the exclusive OTX hopper (which with its internal geometry solves the problem of non-uniform fall flows) and to the dew point

equalizer. X Comb is equipped as standard with an advanced color touch-view control and simple programming.

#### **Customer benefits**

- Constant performance
- Self adaptive airflow
- Dew point Equalizer up to -52 °C

### **■ MOISTURE METER**

MOISTURE METER is a revolutionary resin moisture sensing drying control

#### **Area of application**

Moisture Meter BOX is the device dedicated to the In-line measurement of the plastic granules residual moisture, after drying process and immediately before the polymer transformation. Moisture Meter BOX with the exclusive patented "Power Peak" technology, examines the polymer by emitting special electromagnetic waves, which defines the correct amount of moisture in the granule. The device is capable of measuring to a minimum of 15 parts per million (ppm).

- Moisture Range 15–3000 ppm
- Temperature Range 20–180 °C (68-356 °F)

Moisture Meter BOX scans the material every two seconds and can provide grain quality reports piece by piece or with regular programmable frequencies (every 10÷30 min or an hour). It contains profiles of the most commonly used materials.

It's possible to create profiles for particular materials. Moisture Meter BOX guarantees the production of plastic material products with qualitative and certifiable characteristics and overcoming qualitative audits. It serves to eliminate offline analysis, expensive in terms of process efficiency, time and equipment.

Moisture Meter BOX has connections: Ethernet, USB, Serial RS485. It's MOWIS Ready. The color control Touch View 7" is able to manage up to 6 devices.

#### **Customer benefits**

- Certified production
  - In-line moisture control
- Customized material profiles

## **PBT Rožnov p.R., s.r.o.**

CZ – Rožnov pod Radhoštěm

### **PAV F 043**

### **■ EVOCAM II**

Second-generation top-class digital microscope by Vision Engineering

#### **Area of application**

Universal application in all industrial areas, laboratories etc

#### **Customer benefits**

- Quick and high-standard inspection, documentation and measurement
- Top FHD camera (image frequency up to 60 fps) and tele-centric optics
- Patented optical module for 3D inspection
- Enlargement range 1,7–300× (optically), up to 3600× (digitally)
- Parfocal optical zoom 30:1
- Automated and manual focusing
- Polarisation, USB 3.0, HDMI, memories for various settings, custom overlays, etc.

### **■ v|tome|x m300**

X-ray 3D tomograph for non-destructive analysis of parts, including metrology

### **Area of application**

Material engineering, metrology, medicine, metal/plastic casts, SMT industry, archaeology, defectoscopy

### **Customer benefits**

New quick detectors of dynamic 41|100 and 41|200 (16 MPix and 4 MPix) series providing quick and high-standard 3D part information, including metrology data; accessories such as high-flux|target or scanning methods offset|CT and helix|CT further support the leading position of GE in this area.

### **■ VGSTUDIO MAX**

Software by Volume Graphics for work with 3D data not only for CT

### **Customer benefits**

A most powerful solution on the market, now in version 3.3, for processing of not only 3D voxel data; newly including modules for mould corrections or mechanical simulations – again with direct use of voxel data from CT and other devices.

## **Peak Immersive Finishing**

DE – Roding

### **PAV C 054**

### **■ Peak Immersive Finishing – Peak CL48**

A fully automated traction finisher with chaotic loading ready for Industry 4.0.

### **Area of application**

Good surfaces guarantee long life. Immersion finisher is ideal for edge rounding, drop removal after application or for whole part polishing.

### **Customer benefits**

Surface properties define quality of your part.

Perfect surface multiplies the life of the tool.

Our immersion finisher can achieve optimum surfaces with minimum work demand.

### **■ Modular Robot Cell – db-matik AG**

A modular robotic cell for maximum flexibility of use

### **Area of application**

Simple as well as complex production steps, unpleasant for man, can now be quickly and effectively taken over by a modular robotic cell. A new order can be set before elapse of a single hour.

### **Customer benefits**

High-End-Automation solution flexible in change. Allocate quick operative changes to various tasks.

- Easy robot parking
- Robot usability for other tasks
- One robot can work in more cells

Cooperation mode

## **PRIMA BILAVČÍK, s.r.o.**

CZ – Uherský Brod

### **PAV F 011**

### **■ Werth ScopeCheck® FB DZ**

A multi-sensor technology with increased flexibility

### **Area of application**

The series of Werth ScopeCheck® FB DZ machines offers a compact device with large measuring ranges. This multi-sensor measurement achieves a large combined measuring scope as the smallest

machine with an image processing sensor and a conventional contact probe provides the range of 425 mm x 500 mm x 350 mm. For single-sensor measurement the smallest machine offers the measuring range of up to 530 mm x 500 mm x 350 mm. Higher measuring ranges include for example 1130 mm x 650 mm x 350 mm. The new ScopeCheck® FB DZ is a compact and robust low-weight machine with good response to ambient vibrations.

#### **Customer benefits**

The two mutually independent sensor axes of ScopeCheck® FB DZ provide for various multi-sensor measurements without limitations. After dismantling of the glass table with a bottom lighting unit heavy workpieces can be placed on the measuring table and measured right on it.

#### **■ Accretech measuring devices**

Instrumentation for measurement of roughness, contour and circularity

##### **Area of application**

The SURFCOM NEX series provides for three measurement functions – contour, roughness and hybrid (simultaneous roughness and contour measurement). The detectors are fully optional subject to the individual user needs. The instrument provides both single-purpose measurement with a single detector and a combination of multiple detectors making the device a sophisticated system for multipurpose use.

The series for circularity measurement and measurement of shape deviations, RONDCOM NEX, with top accuracy in class, meets the requirements of precision measurements especially of machined parts. The device provides for improved measurement functions for various types of tasks, excellent resistance and ergonomic design. RONDCOM NEX ushers in a new global standard.

##### **Customer benefits**

The limited liability company PRIMA BILAVČÍK s.r.o., dealing in the field of measuring apparatus, offers a large portfolio of various measuring devices, including roughness, contour and circularity measurement instrumentation by the Japanese company Accretech. Accretech products are the absolute top on the market for their accuracy and reliability. See for yourselves.

#### **■ FARO TracerM Laser Projector**

FARO® TracerM Laser Projector projects an accurate laser beam on object surfaces, providing a virtual template which the operators and assemblers can use with absolute certainty for quick and accurate individual component position checks

##### **Customer benefits**

FARO TracerM Laser Projector helps manufacturers improve both quality and effectiveness. Costs of product scrapping are eliminated thanks to this reliable and cost-effective manufacturing process solution.

### **PROMINENT, spol. s r.o.**

CZ – Kroměříž

**PAV F 029**

#### **■ FISCHERSCOPE XAN 500**

Manual material analyser based on X-ray fluorescence principle

##### **Area of application**

Electronics, mechanical engineering, automotive, research, development

##### **Customer benefits**

Quick, comfortable, flexible and mobile analysis of materials including layer thickness measurement



## Replast produkt, spol. s r.o.

CZ – Plzeň

**PAV A2 039**

### ■ Two-face interior slab

Industrial high-load floor slabs of recycled PVC ideal for warehouses, manufacturing halls and other high-load interior and exterior areas.

#### **Area of application**

Warehouse, manufacturing hall and other high-load room floors, usable for forklift traffic, interior and exterior applications

#### **Customer benefits**

These floor slabs are chemically stable, anti-slide, flame-retardant, and well thermally insulating. Their distinctive features include easy lock-based assembly.

The two-face design offers choice to the customers and extends the product life generally.

### ■ Teardrop load-bearing slab

Industrial high-load floor slabs of recycled PVC ideal for warehouses, manufacturing halls and other high-load interior and exterior areas.

#### **Area of application**

Warehouse, manufacturing hall and other high-load room floors, usable for forklift traffic, interior and exterior applications

#### **Customer benefits**

These floor slabs are chemically stable, anti-slide, flame-retardant, and well thermally insulating. Their distinctive features include easy lock-based assembly.

### ■ Cable tray, small

Cable tray of recycled PVC for hose and cable protection

#### **Area of application**

Protection of cables, hoses and pipes

## RETOS VARNSDORF s.r.o.

CZ – Varnsdorf

**PAV P 065**

### ■ Model of horizontal boring machine RET10X with accessories

A horizontal boring machine in cross variant with slipper, working spindle diameter 100/105 mm, working spindle speed up to 3500 rev/min, standard axis moves: X, Y 2000 mm, Z 1250 mm table clamping area 1500x1500 mm, table load-bearing capacity 8000 kg, AVN, AVH and other accessories.

#### **Area of application**

For universal deployment in mechanical engineering manufacture, ideal for roughing as well as finishing operations

#### **Customer benefits**

Maximum variability of design: adjustable basic axis move lengths, selectable sizes and numbers of clamping surfaces or tables, extension along axis V (slipper) or W (spindle) and/or both, a broad portfolio of technological accessories and other operation, roll guides of all axes, minimum floor size in relation to moves, optional workpiece measurement right in the machine by workpiece probe in the spindle or in the course of machining on the other table, carousel option

## **Rob4Job s.r.o.**

CZ – Praha 9

**PAV C 024**

### ■ **Collaborative robot Sawyer**

A collaborative robot Sawyer with unique equipment by Rethink Robotics using 6 axes for exceptional mobility, optical guide systems and an intuitive interface for Learning by Demonstration

#### **Area of application**

Manufacturing, logistics, services, quality control

#### **Customer benefits**

Easy automation of repeated jobs, consistent quality of the output and high-precision repeatability, quick and intuitive commissioning, user-friendly appearance for support of social aspects of robotisation, automatic orientation in space, high mobility and flexibility for various work tasks

## **SELS s.r.o.**

CZ – Kuřim

**PAV A2 024**

### ■ **MasterMover SM100+**

An electrical battery-operated tractor for load handling on rollers up to maximum load weight of 1,200 kg

#### **Area of application**

The tractor may be used in different areas such as: aerospace, automotive, construction and mining, retail and logistics, steel and fabrication, pharmaceutical, brick and ceramic and many more.

#### **Customer benefits**

- Improved worksite ergonomics and reduction of manual handling of heavy loads
- Increased safety and elimination of forklift traffic in the manufacturing hall
- Reduced need for cranes and increased productivity
- Absence of the necessity of specialise training

### ■ **MasterMover MT300+**

An electrical battery-operated tractor for load handling on rollers up to maximum load weight of 3,000 kg or load handling on rails up to maximum load weight of 12,000 kg.

#### **Area of application**

The tractor may be used in different areas such as: aerospace, automotive, construction and mining, retail and logistics, steel and fabrication, pharmaceutical, brick and ceramic and many more.

#### **Customer benefits**

- Improved worksite ergonomics and reduction of manual handling of heavy loads
- Increased safety and elimination of forklift traffic in the manufacturing hall
- Reduced need for cranes and increased productivity
- Absence of the necessity of specialise training

## **SEMACO tools and software, s.r.o.**

CZ – Jeseník

**PAV P 071**

### ■ **Double vice D2**

A highly flexible double vice with many clamping options of large and small parts.

#### **Area of application**

Clamping of roughed and finished workpieces

## **Customer benefits**

### **Constant high precision**

- Induction hardened vice body
- Quenched clamps
- Long clamp guides
- Nickel-plated body

### **Minimum cleaning requirements**

- The mechanism is fully encased
- Quick and easy rebuilding

### **Comfortable operation**

- Direct and robust third party operation
- High clamping force with low torque
- Direct and quick change of clamping ranges

## ■ [AX-FPS aluminium mill](#)

The new AX-FPS technology is systematically designed for machining productivity and effectiveness.

### **Area of application**

New roughing mill for aluminium by Fraisa.

### **Customer benefits**

Perfect coordination between dampening and cutting for lower energy consumption and spindle torque and for long life and maximum process reliability.

## ■ [Production control software WorkPLAN](#)

The WorkPLAN system provides for the main functions of ERP, specifically oriented towards manufacture to order or project-based manufacture and technical/construction studios.

### **Area of application**

The system openness and its prepared integration permit individual configurations of just the required modules and inclusion in the existing software portfolio or use of ERP as a complex solution for small, medium-sized as well as larger companies.

### **Customer benefits**

The system openness and its prepared integration permit individual configurations of just the required modules and inclusion in the existing software portfolio or use of ERP as a complex solution for small, medium-sized as well as larger companies.

## **Schwäbische Werkzeugmaschinen GmbH**

DE – Schramberg-Waldmössingen

**PAV P 090**

## ■ [BAW02-22](#)

Precision and maximum dynamics for economical freeform surface machining are the special domain of the new BA W02. The machining center is setting new standards in 5-axis machining with linear and torque motors.

### **Area of application**

For machining of workpieces made of non-magnetic raw material as Aluminium / Titan Alloying. The company's energy-efficient manufacturing solutions are used in the automotive and automobile supplier industries as well as aerospace, hydraulics, pneumatics, and in medical and precision engineering.

### **Customer benefits**

Even highly complex workpieces can be manufactured at extremely high speed on just 4 square meters of installation surface - ideal for precision engineering.

Wearfree direct drives ensure the lowest possible total cost of ownership. The sophisticated design allows for chip-to-chip times of less than 2 seconds. That's why the BA W02 stands for pure productivity with maximum availability and the lowest space requirement.

## **Sugino Machine Limited – o.z.**

CZ – Praha 5

**PAV P 087A**

### **■ Automated drilling unit Selfeeder Revo SRV2-2-6030**

State-of-the-art, very compact, accurate and heavy-duty automated drilling unit with spindle speed up to 10,000 rev/min. Stable output. Easy to adjust to requirements for large serial production and integrate into fully automated production lines thanks to innovative construction.

#### **Area of application**

Construction of automated production lines mainly in automotive and aircraft industries

#### **Customer benefits**

- High-speed drilling
- High output at low cost
- Very compact design

### **■ Automated threading unit Synchro Tapper Revo SSTR3-H108**

Threading units of the Synchro Tapper REVO series with high speeds up to 3,370rev/min provide for precision threading. The spindle speed may be set by a speed controller with inbuilt power unit for improved precision and threading cycle time reduction. The unit is easy to connect to your universal PLC.

#### **Area of application**

Construction of automated production lines mainly in automotive and aircraft industries

#### **Customer benefits**

- Easy connection of multi-spindle threading heads
- High compactness of the unit
- Threading option of up to M22 in aluminium

## **SVS FEM s.r.o.**

CZ – Brno

**PAV C 022**

### **■ ANSYS Discovery**

A new revolutionary technology permitting calculations directly in the CAD system environment, for constructors and developers

#### **Area of application**

ANSYS Discovery is based on a principle similar to numerical 3D simulations (FEM). Unlike them, however, this system uses a simple user-friendly environment and does not require knowledge of a computing specialist. Scope of calculations: structural analysis, heat and flow. Application area: development and construction in mechanical engineering, building and other technical industries.

#### **Customer benefits**

Calculation directly in the CAD system environment, response in a few dozen seconds  
Unlimited number of calculated construction variants  
Change of construction with immediate display of calculation result  
Easy operation

## SWISSTOOL EXPORT – GRUPPE

CZ – Praha 3

**PAV P 062**

### ■ Turning automaton ESCOMATIC NM 8 FLEXI

In contrast to conventional turning automatons ESCOMATIC turning machines are distinctive by their unique principle of operation: the material is fed into the machine in the form of a scroll, evened and machined by a rotary tool head.

#### **Area of application**

Production of workpieces in small, medium and large series, unique productivity and show turning times thanks to closeness of the tools.

Max. material diameter: 8 mm

Max. workpiece length: 150 mm

Number of tools: 4 (2 at a time)

#### **Customer benefits**

Cost saving – bar feeder not needed, scroll cheaper than bar, 24-hour production thanks to the scroll.

## TFC Europe

CZ – Hranice na Moravě

**PAV V 071**

### ■ Wave Springs

A Smalley Wave spring offers the unique advantage of space savings when used to replace coil springs.

#### **Area of application**

Car industry, Oil&Gas Industry, Construction, Aerospace, Military

#### **Customer benefits**

Reduced spring height by up to 50%, Same force and deflection as coil springs, Fit tight radial and axial spaces, Over 4,000 standard sizes, No Tooling Charges for special designs, Exotic alloys for all environments.

### ■ Spirolox Retaining Rings

Smalley's Spirolox Retaining Rings are manufactured by coiling the ring from flat wire and have many advantages over stamped retaining rings and circlips.

#### **Area of application**

Car industry, Oil&Gas Industry, Construction, Aerospace, Military

#### **Customer benefits**

No gap – full 360° retaining surface, No protruding lugs to interfere with mating components (uniform cross-section), Economically produced in stainless steel, Easy installation and removal, No tooling charges on custom designs, Available in a wide range of exotic materials and finishes, Special end configurations to suit your application

## TOS Hostivař s.r.o.

CZ – Praha 10

**PAV P 109, VP P 006**

### ■ Universal tip grinder UB 32/1000 CNC

A universal tip grinder UB 32/1000 CNC with Siemens Sinumerik 840 D SL control system in a new, modern design

### **Area of application**

- Flexible and economical concept for piece and serial manufacture
- Grinding of cylinders and shafts of small to medium weights
- CNC Siemens Sinumerik 840 D SL
- Manual or automated grinding
- Outside and inside surface grinding

### **Customer benefits**

- High precision and reliability thanks to long tradition and extensive experience in the area of development and manufacture of universal tip grinders
- Development based on the newest knowledge in the area of grinding
- Flexible setting of final completion

## **TOS KUŘIM – OS, a.s.**

CZ – Kuřim

### **PAV P 041**

#### **■ Fork head with electrical spindle VKE**

Automatically replaceable fork head with continually controlled axis, electrical spindle with maximum speed of 18,000 rev/min, power of 25 kW, momentum of 87 Nm and HSK-A63 clamp

#### **Area of application**

Aircraft industry – products of complex shapes

Automotive – machining of shaped elements – moulds

Universal use with small-diameter tools

#### **Customer benefits**

Added continually controlled machine axis – five-axis machining

Machining of shaped pieces – shorter production times and extended portfolio, high surface quality

#### **■ Fork head VK-C**

Automatically replaceable fork head with maximum speed of 2500 rev/min, power of 80 kW, momentum 3200 Nm and ISO 50 tool clamp

#### **Area of application**

Mining and extraction industry – large workpieces

Energy – nuclear reactors, wind power plants

Weapon industry – armoured vehicles

#### **Customer benefits**

Added continually controlled machine axis – five-axis machining

High momentum, higher material reduction, high productivity of complex shape machining

## **TOSHULIN, a.s.**

CZ – Hulín

### **PAV P 041**

#### **■ Straight head with electrical spindle**

A straight head with integrated water-cooled electrical spindle with speed of 8000 rev/min, power of 22 kW, momentum 91 Nm and HSK – A63 tool clamp

#### **Area of application**

Aircraft industry – workpieces with a large number of small holes

Workpieces with high surface quality – surface roughness up to Ra 0.1

### **Customer benefits**

Shortening of production times in machining of a large number of holes – use of high-speed drills and long moves

Increased productivity – integration of multiple operations in one machine – grinding can be replaced with electrical spindle milling

### **■ Angular head with electrical spindle**

An angular head with integrated water-cooled electrical spindle with speed of 8000 rev/min, power of 22 kW, momentum 91 Nm and HSK – A63 tool clamp

#### **Area of application**

Aircraft industry – workpieces with a large number of small holes

Workpieces with high surface quality – surface roughness up to Ra 0.1

#### **Customer benefits**

Shortening of production times in machining of a large number of holes – use of high-speed drills and long moves

Increased productivity – integration of multiple operations in one machine – grinding can be replaced with electrical spindle milling

### **■ Railway wheel**

Special wheel for high-speed trains

#### **Area of application**

High-speed and standard trains, underground trains, tramways, railway engines and wagons

#### **Customer benefits**

Improved steel quality and state-of-the-art thermal processing for reduced wear of wheels and rims

## **velorXtrike s.r.o.**

CZ – Ostrava – Stará Bělá

### **PAV Z 105**

### **■ E-Van, (E-Choice) – small electrical scooter, E-pioneer (scooter)**

A small variable electrical van for transport and delivery services, in the case of e-pioneer a revival of the pioneer scooter legend in a retro design with fully electrical drive

#### **Area of application**

Natural persons and legal entities, transport and delivery services, for more information please visit [www.vxt.cz](http://www.vxt.cz).

#### **Customer benefits**

Electric mobility – transport of the future, simple maintenance, low operation and maintenance costs, sufficient space for transported goods, chassis, range and charging variability: Exhibition of a functional prototype of the E-Pioneer motorcycle.

## **Brno University of Technology**

CZ – Brno

### **PAV Z 124**

### **■ ARCOR – Augmented Reality Collaborative Robot**

An interactive worksite for effective and safe man-robot cooperation based on extended reality, robot programming is simplified thanks to modern technologies to be manageable by any employee

**Area of application**

Small and medium-sized companies with relative frequent production changes, a worksite for workspace sharing between man and robot

**Customer benefits**

Simplification of production changes, creation and adaptations of robotic programs by normal employees without programming skills, shortened times of robotic line adaptation to a manufacturing procedure change.

**■ BARMAN – Industry 4.0 Testbed**

Testbed built at the Department of Automation and Measuring Technology for the purpose of teaching and demonstrations of principles linked to Industry 4.0

**Area of application**

The finished testbed will be used for extension of knowledge of students of automation technologies towards device construction, virtual simulations and virtual commissioning. As the individual parts of the testbed will work like parts of a real manufacturing plant, the students understanding the testbed principles will find it easier to understand practical issues.

**Customer benefits**

Graduates with multidisciplinary knowledge represent a significant asset for their future employers

**■ Dragon 8 - TU Brno Racing - Formula Student**

Dragon 8 is a formula vehicle designed and built primarily by students of the Faculty of Mechanical Engineering of BUT. The eighth vehicle of the TU Brno Racing team has achieved significant success.

**Area of application**

The global competition Formula Student is a very complex project for students of universities of technology. Bachelor and master course students design, build, test and compete with a formula-type vehicle. The evaluations at international competitions include engineering design presentation, production process and business plan for the vehicle sales. The vehicle is tested in several circuit disciplines. The competition brings practical experience to its participating students

**■ Hybrid pumping system**

This hybrid pumping system is based on the principle of ring engine. The rotor consists of the axial pump (turbine) runner with the stator built in the pipeline. Serial arrangement of these elements allows for liquid pumping across large distances with low pipeline pressures.

**Area of application**

This hybrid pumping system is designed for liquid transport across large distances and liquid pumping from low depths. The system can be used in both pump and turbine mode and for rescue purposes. The system is clog-free.

**Customer benefits**

High efficiency and universal application.

**■ Hybrid design of console for fixation of telecommunication satellite antennas**

The console was designed by LK Engineering and produced and tested at the Faculty of Mechanical Engineering of BUT. The test sample was developed in the context of a project for the European Space Agency (ESA) as a study of a new approach to part designing using micro-bar structures, topological optimisation and additive metal production.

**Area of application**

The console is used for fixation of communication antennas in the desired positions on the eternal frame of the satellite. The antennas must stand space shuttle start stress, including intense vibrations, with low-weight design. The hybrid system comprises a flexible bar load-bearing frame (bar diameter circa 2–5 mm) in combination with micro-bar structure (bar diameter circa 0.5–2.5 mm). Thanks to the hybrid design the console weight was reduced by circa 20 % in comparison to the variant only using the micro-bar structure.



### **Customer benefits**

Topological optimisation of micro-bar structures in combination with the additive SLM technology allows production of components using minimum material quantities able to withstand the required stress. The same approach can be used for optimisation of other parts for the automotive and aircraft industries where weight is of essence.

### **■ Mobile tester of automotive absorbers TriTec**

The mobile tester of automotive shock absorbers TriTec2 features low manufacturing costs and high mobility. Its unique structure in combination with a new diagnostic algorithm assures quick and precise analysis of the car shock absorber condition without the need to dismantle the absorber from the car. This solution is protected with two Czech patents.

#### **Area of application**

The mobile tester TriTec is a device used for on-car shock absorber condition measurement, i.e. without the need for the absorber dismantling from the car. The TriTec structure is based on that of standard resonance adhesion testing equipment used in car repair shops but with half the measurement platform stroke. The engine torque is transferred onto the eccentric shaft via a cog-wheel transmission. The eccentric shaft holds a pendulum frame with the measuring platform. When the eccentric shaft rotates the measuring platform swings within  $\pm 1.5$  mm. The measuring platform is connected to the swing frame with a bending strength sensor recording the compressive strength between the wheel and the platform, see fig. 2. Another sensor, an inductive speed sensor, is installed on the tester frame to measure speed of the eccentric shaft, and hence the position of the measuring platform. These two recorded signals then define the condition of the car shock absorber pursuant to the existing as well as newly designed methods.

#### **Customer benefits**

Reduced stroke assured quieter operation of the tester and allows for use of smaller structural dimensions for the reason of reduced stress in the course of the test. Thanks to the reduced dimensions and lower weight the tester is easy to handle and absorber condition can be measured outside the workshop.

### **■ Falcon Pneumobile**

A racing monopost with unique compressed air drive

#### **Area of application**

A student project focused on pneumatics with the aim to construct and make a racing monopost with maximum possible power and maximum possible utilisation of compressed air energy. The design uses both standard and tailor-made pneumatic elements. The vehicle participates regularly in the annual Eger race in Hungary where the BUT team is one of the favourites.

#### **Customer benefits**

Pneumobile is a unique Czech project with a real output. The project increases awareness of pneumatic systems among students. Thanks to the project the participating students learn how to work with pneumatic elements and how to use compressed air effectively. The team cooperation with businesses is another major asset of the project.

### **■ Drive of an emission-free electro-hydraulic battery-powered excavator up to 2 t – selected elements**

This new type of drive replaces the existing combustion engine in excavators. Its main parts include a power block of electric accumulators, a special power unit driving an axial hydro generator with a Load sensing system, unique electronic and hydraulic driving systems, straight and rotary hydro engines etc.

#### **Area of application**

This new type of drive predestines the excavators using it where their operation is required to be free of emissions and noise generated by standard combustion engines, such as in enclosed spaces, protected premises such as hospitals, rehab centres, nature reserves etc.

### **Customer benefits**

A new type of drive

- Permits work in enclosed spaces and protected spaces without the gaseous and noise emissions of combustion engines;
- Brings new options of effective use of installed electrical power in mobile machines.

### **■ Set/block of Lithium-ion accumulators**

A set of 16 LiFePO<sub>4</sub> accumulators for the 48 V solar accumulation system

#### **Area of application**

The set is primarily designed for storage of electricity generated by renewable resources (photovoltaic, wind)

#### **Customer benefits**

Renewable energy sources are non-controllable energy sources (presence of sunshine or wind is controlled by the nature). For that reason, to be able to fully utilise these renewable sources, the generated energy must be accumulated when generated for subsequent use as needed. For example the sun shines in daytime when there is no one in the house. Thanks to the batteries this energy can be stored and used in late evening hours when the sun does not shine any longer.

### **■ Design vision of CNC machine tool Pegasi 51**

Design vision of CNC machine tool Pegasi 51, a term thesis by Ondřej Kalenský of the Department of Industrial Design of Faculty of Mechanical Engineering of BUT for 2015/16, supervisor: Doc. Academic Sculptor Ladislav Křenek, ArtD.

#### **Area of application**

Construction and design of machine tools

#### **Customer benefits**

The vision of CNC Pegasi 51 presents an innovative technical concept with a radically unconventional installation of the head stock, reflected in a new approach to the design of this segment of machine tools. The dynamic installation of the head stock contracts to the strictly square work space, also thanks to its grandiose closing with a high slide door.

### **■ High-performance combined oil-gas burner**

A combined oil and gas burner designed for combustion of alternative and non-standard gaseous and liquid fuels. The burner is to be installed in boiler and process furnaces.

#### **Area of application**

The burner is to be installed in boiler and process furnaces.

#### **Customer benefits**

Optional use of low-heating-capacity gaseous fuels and waste liquid fuels

### **■ Equipment for parallel hydro forming**

The equipment includes a hydraulic multiplication unit compressing water up to 120 MPa and a forming chamber where the part is formed. The part consists of two laser-welded sheet metals, one with a neck for the forming liquid entry between the sheets for forming a shell of the two sheet metals by the liquid pressure in the shape of the forming chamber.

#### **Area of application**

Expected application areas include bodywork production for the automotive industry, for wagons and for aircraft and aerospace construction, production of heat exchangers and solar absorbers and light structures in architecture.

#### **Customer benefits**

Optional forming of light shells and flow structures which cannot be made by classical technologies. The manufacture must use large hydraulic presses for the pressed piece formation.

## WEBER Schraubautomaten GmbH

DE – Wolfratshausen

### PAV V 129

#### ■ Manual screwdriver HSE with C30 control and ZEL feeding unit

An electrical manual screwdriver with automated move

##### **Area of application**

Flexible manual worksites in the electrical industry, automotive industry, mechanical engineering, aircraft construction, telecommunications, household equipment manufacturing, medical device production, wood processing

##### **Customer benefits**

- High ergonomics thanks to integrated bit lift – for untiring work
- Variability thanks to modular structure
- Extremely short tact time thanks to automated move and optimised screw guiding
- Assembly process results are shown on a panel with a touch screen and provided via an interface
- Quick-release clamps for bit change without use of tools
- Optionally usable with customer drive
- Part-friendly feeding thanks to graduated feeder

#### ■ Stationary screwdriver SEV with C30 control and ZEL moving unit

##### **Area of application**

Stationary screwing is used for complex connection processes, short tact times and higher quality demand of:

The electrical industry, automotive industry, mechanical engineering, aircraft construction, telecommunications, household equipment manufacturing, medical device production

##### **Customer benefits**

- Variability thanks to modular structure
- Accurate screwing and gaps
- Extremely short tact time thanks to automated move and optimised screw guiding
- Assembly process results are shown on a panel with a touch screen and provided via an interface
- Vacuum technology for safe screwing in sunk and inaccessible places
- Optionally usable with customer drive

Part-friendly feeding thanks to graduated feeder

## Wheelabrator Czech s.r.o.

CZ – Příbram

### PAV E 057

#### ■ Circular milling device Wheelabrator Vibro SmartLine MRV 1

The machine is designed for wet milling using milling particles, process water and compound or for dry milling without process water and compound, in which case the machine is equipped with a dust vacuuming device.

##### **Area of application**

Deburring, polishing, grinding, smoothening, super finishing and “part-by-part” milling

##### **Customer benefits**

Used in mass production of small and medium-sized parts where the technology requires the above mentioned operations: The benefits include high effectiveness of production, low production costs and labour costs.

## WHP TECHNIK s.r.o.

CZ – Brno

**PAV P 076**

### ■ Linear altimeter TESA MICRO-HITE plus M with motorised control

A new generation of altimeters for 21<sup>st</sup> century – functionality, control and design

The device is supplied in three measurement ranges: 0–350 mm, 0–600 mm, 0–900 mm.

#### **Area of application**

Altimeters can be used anywhere where exact metering is required within the whole measuring range. The device is ideal for metering laboratories where users are able to use its potential to the full. Thanks to a wide range of touches the altimeter can become a universal help.

#### **Customer benefits**

The main asset is intuitive work with these sophisticated altimeters. In addition to the standard well-known high accuracy, repeatability and compactness these altimeters are equipped with hybrid imaging units for touch control and button selections. The control SW intuitively guides the user towards all functions thus maximising the user's readiness to use the altimeter to the full. The battery operation is up to the standards of professional accumulation tools where thanks to an eternal charger and a reserve battery you can forget about a power cable.

### ■ Digital magnetic probes Magnescale with USB output

Robust touch probes with USB output for laboratory and quality control station use

#### **Area of application**

Control and measuring stations requiring very fine resolution and high precision and repeatability of measurements with the required data output of the measured values to a PC (with Windows OS).

#### **Customer benefits**

Measurement record simplification by automated transfer of the measured values into statistical and recording systems - no need for other hardware or inverters – just a USB probe and a program for data collection in your PC.

## YOUNG4ENERGY s.r.o.

CZ – Ostrava – Mariánské hory

**PAV Z 105**

### ■ Condensation micro-cogeneration unit TOTEM 20

The micro-cogeneration unit TOTEM 20 with high efficiency of up to 107.4 % (A++) and extremely low emissions of NO<sub>x</sub> and CO always below 18 mg/Nm<sup>3</sup> with condensation mode in the standard variant, electric output 20 kWe, thermal output 48.5 kWt.

#### **Area of application**

Heat generation for heating and hot water preparation in connection with gas boilers for residential houses, hotels, SME premises, local boiler rooms, schools, hospitals, sports stadiums, pools, offices, shopping centres etc. with simultaneous electricity generation for in-house use.

#### **Customer benefits**

- Reduced acquisition costs of electricity and heat
- Replacement of outdated technologies with the most effective state-of-the-art technology in the market
- Increased efficiency of electricity and heat generation by dozens of percent
- Extreme reduction of emissions from electricity and heat generation
- Independent in-house environment-friendly electricity and heat generation

■ **Mobile stand for collaborative robot**

A universal mobile stand, UMS, for a collaborative robot allowing for simple connection of the robot to a work site or a production line and quick move between work sites

**Area of application**

In connection with Techman robots and their camera this robot enables automated 3D image on-site calibration.

**Customer benefits**

Simple connection of the robot to a work site or a production line and quick move between work sites by the user: the stand includes full connectivity of the robot to the work site

■ **Robot TECHMAN TM12**

Collaborative robot TM12 with a camera and load-bearing capacity of 12 kg at the reach of 1300 mm

**Area of application**

Ideal for assembly, packaging, pallet loading, machine operation, glue applications etc.

**Customer benefits**

The integrated camera vision system and flow-chart programming allow for easy and quick integration into manufacturing processes with minimum costs.