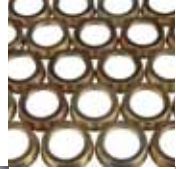


PRODUCTION CAPACITY PROFILE

Quality - Reliability - Precision



ABOUT US

► MARS Svratka, a.s.

MARS Svratka, a.s. focuses on metal processing - particularly pressing, welding, assembly and surface treatment. We offer product manufacturing as well as construction proposals and tool and preparation production according to the customer's requirements and needs.

One of our biggest advantages is the comprehensiveness of our production, which is based on the diversity of utilised technologies including the possibility of final surface treatment by powder-coating or zinc plating using our own automated lines.

► TRADITION

The history of MARS Svratka reaches back as far as the end of the 19th century, when the tradesman Jan Berounský established a family business focused on the manufacture of metal goods and kerosene lamps under the brand MARS.

Having a tradition means for us in particular to believe in traditional values, such as top-level handcrafted quality and solid business relations.

► COMPANY DEVELOPMENT

Our vision is to be a FLEXIBLE, ENTHUSIASTIC and INNOVATIVE company.

Our ongoing improvement programme focuses on all activities leading to making production methods more sophisticated and to increasing product quality and productivity.

Decreasing direct and indirect costs has an immediate impact on the price of our products, which is a key factor influencing our business and as a result our investments into growth.

► OUR PEOPLE

People have been the right know-how for the MARS brand. Our traditional craftsmen as well as their detailed knowledge of our utilised technologies are essential for our production.

Care for our employees' expert and professional advancement is one of the basic pillars of our activities.



► RESPONSIBLE APPROACH

Our joint-stock company considers responsible behaviour towards the region's inhabitants a matter of course. It is not only about creating job opportunities or charity activities.

With maximum responsibility, we also address environmental protection, which we fulfil beyond the framework of legal laws and regulations.

QUALITY GUARANTEE

► PROFESSIONALISM

The joint-stock company MARS Svatka also guarantees production and business quality due to its dedicated approach to education and the professional growth of its people.

Monitoring of the latest production and technological trends along with utilising modern technologies and work tools are for us basic prerequisites for successful business operations.

► BUSINESS

Among our clients there are our partners (cooperation and outsourcing) or buyers of final products (mainly wholesalers).

Our business service addresses the varying demands of individual customer groups by offering customised services.

► REFERENCE:

HETTICH ČR k. s.

ŠKODA AUTO a. s.

ZETOR TRACTORS a. s.

V.P.F. MEDIUM s. r. o., Slovakia

NEKVINDA – ZEMĚDĚLSKÁ TECHNIKA a. s.

FEROPLAST spol. s. r. o.

DEKO DRAHT

HAŠPL a. s.

KEBEK s. r. o.

M.A.T. GROUP, s. r. o.

ISRINGHAUSEN GMBH CO. KG, Germany

STORY DESIGN, a. s.

MANUTAN s. r. o.

KAISER + KRAFT s. r. o.

OBI MARKET

HORNBACH

BAUMAX ČR s. r. o.

TECHO a. s.

► BRANDING

Our products are branded with pictograms that clearly define their qualitative benefits. These are both traditional features, such as product recyclability or environmental friendliness, and exceptional product features such as sophisticated construction, choice of quality material and production precision.

List of pictograms and explanations (as shown on packaging)



High luminosity



Anti-corrosive material and treatment



Ecological product



Safety shutters (locks)



Fully recyclable product



Made in Czech Republic



Waterproof letter boxes



Glass mirror

► QUALITY

Our product quality and professional services are also proven by the quality management certificate according to the ČSN EN ISO 9001:2009 norm, which is regularly audited by TÜV.



DEVELOPMENT AND DESIGN

We are able to provide the complete development and design of tools, fixtures and final products from first proposals to the serial production.

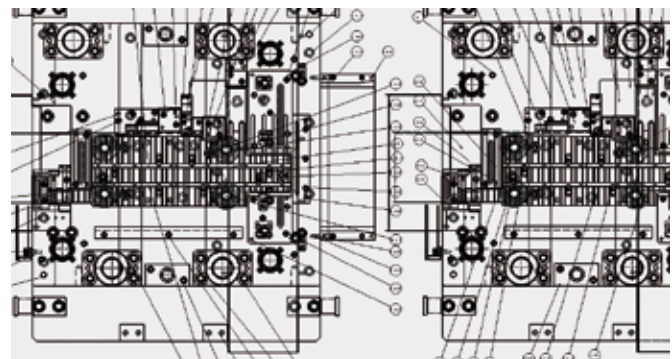
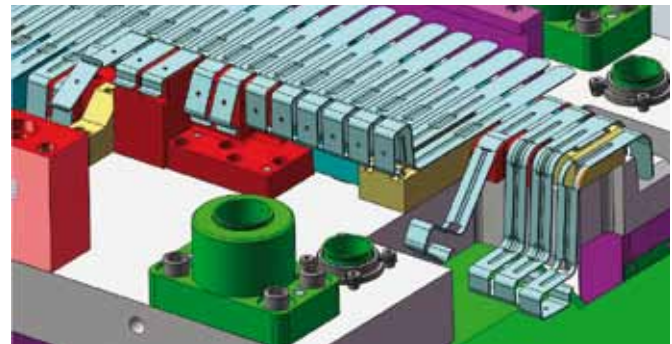
- pressing tools (cutting, bending, drawing, progressive)
- fixtures for machining, milling, drilling, welding, assembling, etc.

We produce both prototype and serial tools.

Maximum dimensions of manufactured tools: approx. 600 × 1,200 mm.
Maximum weight of manufactured tools: approx. 2,000 kg.

► CAD

- SolidWorks
- AutoCAD
- Pro Engineer
- Required softwares modules, for instance Mechanical Desktop or Autodesk Inventor, which make readable and editable all kind of documents as IGES, DXF, DWG, PRT, STEP, IPT, ASM and more.



TOOL SHOP

TOOL SHOP CHARACTERISTICS – TOOLS MANUFACTURE OFFER:

- manufacture of all types of pressing tools (cutting, bending, drawing, progressive)
- manufacture of fixtures for machining, milling, drilling, welding, assembling, etc.
- repairs of pressing tools and fixtures
- grinding of all types of pressing tools (surface, round, profile grinding)
- machining of parts (piece production)
- metal cutting (turning, drilling, slotting, planing, milling)
- electrospark machining (cutting)
- manufacture of components for the above stated production
- designing work

CAM

Wide range of other softwares required for machinery production, for instance:

- Edge CAM
- SolidCAM / InventorCAM

ELECTROSPARK MACHINING – WIRE CUTTING

MACHINE TYPE:	HITACHI A203R
Maximum work-piece size	550 × 400 × 170 mm
Travel of x - y - z axes	320 × 250 × 170 mm
Travel of U-V axes	± 30 (60 × 60) mm
Maximum weight	200 kg

MACHINE TYPE:	VPJM
Maximum work-piece size	700 × 500 × 300 mm
Travels of x - y - z axes	500 × 350 × 300 mm
Travel of U-V axes	± 100 (200 × 200) mm
Maximum weight	600 kg

JIG-BORING MACHINE

MACHINE TYPE:	HECKERT
Table dimension	710 × 400 × 620 mm
x, y, z acceleration	710 × 400 × 620 mm
Swivelling table	diameter 500 mm
Vertical spindle	

CNC PROCESSING

MACHINE TYPE:	OC INTOS MCX 1200/FANUC 2LI
Clamping surface of the table	1300 × 620 mm
Travels x - y - z axes	1200 × 600 × 600 mm
Machine speed	8000 ot/min
Maximum load of the table	800 kg

TOOL SHOP MILLING MACHINES: 800 × 400 mm

MACHINE TYPE:	HECKERT
Surface grinding machines	650 × 650 mm
Round grinding machines	300 × 700 mm
Flat grinding machines	
Centre lathes	300 × 1500 mm, 710 × 1000 mm

PRESSING

MACHINE TYPE	PCS	LIMITING SIZE OF THE MATERIAL
Centre press 10 t	13	clamping face 320 × 320 mm
Centre press 25 t	14	clamping face 430 × 625 mm
Centre press 40 t	9	clamping face 515 × 660 mm
Centre press 63 t	12	clamping face 605 × 800 mm
Centre press 100 t	5	clamping face 640 × 1 000 mm
Centre press 160 t	5	clamping face 710 × 980 mm
Centre press 250 t	1	clamping face 785 × 1 120 mm
Centre press 400 t	1	clamping face 825 × 1 250 mm
Hydraulic press CDM 80 t	1	clamping face 740 × 740 mm
Hydraulic press LB 175 t	1	clamping face 600 × 600 mm
Hydraulic press 100 t	2	clamping face 800 × 630 mm
Edge hydraulic press CNC 130 t	1	length of bend 3 000 mm
Edge press up to 50 t	1	length of bend 2 000 mm
Level pulling press LKT 250 t	2	clamping face 1200 × 1 600 mm
Level, two-point press LUD 500 t	3	clamping face 2 480 × 950 mm
Two-point press with laying LDC 250 t	1	clamping face 2 450 × 880 mm
Hydro-mechanical press CTM 400 t	1	clamping face 1 590 × 1 260 mm
Automatic press TEV AP 25 t	1	clamping face 360 × 550 mm
Transfer press	2	clamping face 600 × 2 000 mm
Felling machine OMERA	1	component parts margins scrolling (diameter max. 640 mm)
Mechanized press workplace MLP-250 t	1	max. width 300 mm, thickness 0,2 – 3 mm
Mechanized press workplace MLP-250 t	1	max. width 300 mm, thickness 0,5 – 4 mm
Mechanized press workplace MLP-63 t	1	max. width 200 mm, thickness 0,3 – 2 mm
CNC cutting and punch press centre VIEDEMAN	1	limiting size of the material 1,5 × 1 000 × 1 200 mm
Mechanized press workplace MLP 500 t	1	max. width 500 mm, thickness 0,5 – 4 mm



► EQUIPMENT CONFIGURATION AND TECHNICAL PARAMETERS OF MECHANIZED PRESS WORK PLACES:

	MLP 500	MLP 250 I	MLP 250 II.	MLP 63	UNITS
PRESS	LUD 500	LE 250 C	LE 250 C	LEN 63 C	
Nominal rated	5000	2500	2500	630	kN
Number of strokes	20	45	45	60	number/min
Stroke	315	30 – 140	30 – 140	10 – 105	mm
Grip	682	360	360	335	mm
Ram clamping face/cavity	2400 × 870	800 × 475	800 × 475	D 50/80	mm
Table clamping face	249 × 950	1120 × 800	1120 × 800	800 × 630	mm
Gar	x	450	450	319	mm
FEEDING MACHINE	VPJM 500/80	VSE 310	VPJM 300/80	VS 300	
Max. stripe width	500	310	300	300	mm
Material thickness	0,1 – 5	0,2 – 3	0,5 – 4	0,3 – 2	mm
Feed rate	120	100	120	100	m/min
STRAIGHTENING MACHINE	RPM 500/60	QRM 300/4	QRM 300/4	QRM 300/4	
Max. stripe width	500	300	300	300	mm
Material thickness	0,5 – 4	4	4	4	mm
Speed of feed	30	33	33	39	m/min
UNWIND REEL	BAI 40/40	HOE 2500	EBN 10/360	HO 300	
Loading capacity	2000	2500	1000	1000	kg
Max. stripe width	500	300	360	300	mm
Coil inside diameter	460 – 530	445 – 525	400 – 550	450 – 470	mm
Max. coil outside diameter	1400	1400	1400	1200	mm

► SUMMARY OF PARAMETERS

Pressing power	5000	2500	2500	630	kN
Max. stripe width	500	300	300	300	mm
Material thickness	0,5 – 4	0,2 – 3	0,5 – 4	0,3 – 2	mm



TECHNICAL PARAMETERS OF PRESS OF TONNAGE RANGE FROM 160 – 500 T

PRESS TYPE	LE 160	LE 250	LDC 250	LKT 250	LE 400	LUD 500
Nominal rated (kN)	1600	2500	2450	2500	4000	5000
Stroke (mm)	20 – 120	30 – 140	200	250	30 – 160	315
Ram adjustability (mm)	100	110	120	150	120	130
Number of strokes (min-1)	50	50	38	25	40	20
Grip (mm)	330	360	550	760	470	682
Ram clamping face (mm)	750 × 380	880 × 475	2200 × 700	1080 × 1580	950 × 560	2400 × 870
Table clamping face (mm)	1000 × 720	1120 × 800	2450 × 880	1200 × 1600	1150 × 900	2498 × 950

WELDING

MACHINE TYPE	PCS
WELDING IN PROTECTIVE CO2 ATMOSPHERE	
Welding set WLS P 315 P	4
Welding set CLOOS AC 200	3
Welding set WMP 200	4
SPOT WELDING	
Pneumatic spot welder WBP – 20	1
Pneumatic spot welder BP – 50	1
Pneu. spot welder DANUBIUS BN – 10	16
Pneumatic spot welder BP – 50	2
Pneumatic spot welder TSP – 100	3
Pneumatic spot welder WBP – 20 C	2
Pneumatic spot welder WBP – 40	3
Pneumatic spot welder WBP – 80	2
SEAM WELDING	
Seam welder SCHLATTER	1
Seam welder UN – 63	1
Seam welder WSP – 161 R	1
Seam welder SP – 60	1
Seam welder SSP – 61 R	1

MACHINE TYPE	PCS
PLAZMA WELDING – INTENDED FOR STAINLESS SHEET METAL	
Seam welder OERLIKON SPS 220	1
Manual welding TIG PRESTO 16	1
GAS WELDING (OXYGEN + ACETYLENE)	
Gas welding workplace PZ	3
STUD WELDING	
Stud welder SHORT	1
SOLDERING PROCESS	
Soldering	1
Brazing	1



MATERIAL PROCESSING

ROLLING SHEET METAL

MACHINE TYPE	PCS	LIMITING SIZE OF THE MATERIAL
Sheet metal roll unit	5	1 × 1000

BENDING

MACHINE TYPE	PCS	LIMITING SIZE OF THE MATERIAL
Levelling and bending machine XZP 35	1	profile bending and levelling
Manual sheet-metal bender	5	1 × 1000 mm
Edge hydraulic press CNC 130t URSVIKEN	1	length of bend 3 mm

CUTTING

MACHINE TYPE	PCS	LIMITING SIZE OF THE MATERIAL
Table machine cutters NTC 2500	1	table 3 × 2500 mm
Table machine cutters NTE 3150/6,3	1	table 6 × 3000 mm
Table machine cutters NTC 2000	1	table 1 × 2000 mm INOX
Manual lever cutters	2	paper, flap
Table machine saw BIANKO	1	

MACHINING

MACHINE TYPE	PCS	LIMITING SIZE OF THE MATERIAL
Threading machine	2	
FLOWDRILL threading	2	diameter of thread M6, M8



SURFACE TREATMENT

► POWDER COATING

All the used powder plastic materials in a wide range of colours of the RAL scale meet strict standards (e.g. composition without heavy metals and application without emissions). They guarantee quality and stability of the surface even under demanding conditions of exterior usage.

The automatic coating line in Mars Svratka a.s. uses the **Nordson ColorMax3** technology. The application of the powder paint is performed by the latest new generation application technology called **Nordson Prodigy II**. 12 automatic nozzles are controlled by the modern iControl system according to the selected working programme saved in the memory. The automation of the paint application is provided by identifying the product passing through the cabin by means of a light-sensitive screen with a high resolution and encoder of the conveyor movement. The signal of these sensors is processed by the iControl system. This line represents the most ecological, economical and safest method for applying powder paints in the field of modern coating. The used **Nordson Prodigy II** application technology represents the most possible productivity and the highest degree of usage of powder paints. The modern parameters of the electrostatic application system provide high quality of final products.

This technology provides:

- Possibility of quick changes in colours.
- High efficiency and versatility of the application.

The equipment complies with all hygiene regulations concerning paint shops that are valid in the EU.

Individual components of the paint shop are tested by authorized institutions (British Standards Institute and Sira in Great Britain, Factory Manual in USA, CESI in Italy).

The system consists of the following phases:

- Pre-treatment by applying iron phosphate (DURIDIN 3960).
- Drying in a hot air furnace – artificial ventilation provides balanced air distribution.
- Applying the powder in a cabin – using units with electrostatic nozzles.
- Hardening in a hot air furnace – recirculation of hot air, in-built generator.
- Cooling in the line.

The equipment is made of high quality materials which provide a continuous operation without problems.

Technical specification of maximum dimensions of products for powder coating in the automatic line:

Width:	0,8 m	0,4 m
Length:	0,8 m	1,25 m
Height:	2 m	2 m

Maximum load of the conveyor:

80 kg/m

The equipment complies with the following standards:

Machine Directive 2006/42/CE, UNIEN 12981, UNIEN 12215, UNIEN 1539:2003, ATEX DIR 94/9 CE, Electromagnetic Compatibility (EMC) Directive 89/336, Low Voltage Directive DIR 73/23, IEC 34-1, CEI2-3, en 60034 – 1, CEI60204-1, DLGS 626/94 and subsequent amendments, ISO 9001:00.



► ZINC ELECTROPLATING

Zinc electroplating in mass and pendant processes is done on fully automated lines. We achieve excellent anticorrosive protection of iron materials with Zn electrolyte. The final coats are highly resistant against the effects of salt spray and sulphuric atmosphere.

Suspension technology

Size of electroplating tanks:

- 2 000 × 1 000 × 300 mm
- 2 700 × 800 × 400 mm

Bulk technology

Pursuant to the size of parts and their weight up to 50 kg per drum. The prices for plating are determined according to the required thickness of the galvanic coating, passivating, chromate treatment, sealing of the layer and corrosive resistance.

Types of chromates performed:

Fe/Zn – blue passivating

Fe/Zn – yellow chromate

Fe/Zn – blue

passivating or yellow chromate + passivating layer sealing

Thick-layer passivating using the mass technology

This technology provides:

- excellent anticorrosive resistance
- ductility of metal coat with little internal stress and excellent adhesion
- function of connecting elements is preserved
- excellent metal decomposition
- very slight saturation of original material by hydrogen, passivating ability of the alloyed coat



MACHINE TYPE	PCS	LIMITING SIZE OF THE MATERIAL
Jet unit PDS	1	1 × 1000
Milling drum OS 1 A	2	
Ball polishing vibrator TAUSS TPV	1	
Degreasing line IMAC	1	entry 500 × 500 mm
Powdering line NORDON PRODIGY	1	entry 800 × 2000 mm
Manual powdering cabin PNH	2	
Electroplating pendant process	2 lines	max. 4 m ²
Electroplating mass process	2	max. 50 kg per drum

All chemicals are provided with a data safety sheet pursuant to the Act no. 27/1999 Coll.
Their usage is in accordance with the Act no. 157/1998 Coll.

Metal-coating is performed pursuant to the following standards:

ČSN EN 12329, ČSN EN 1403, ČSN ISO 4520, ČSN EN ISO 2064, ČSN EN ISO 9227, Volkswagen Škoda VW 13750 TI 217.

► PACKAGING

MACHINE TYPE	PCS	LIMITING SIZE OF THE MATERIAL
Foil wrapping MINIPACK	2	max. width 70 cm
Foil tunnel PVC	3	according to par. of mach.
Wrapping machine	2	according to par. of mach.
Automatic foil tunnel line	1	according to par. of mach.

All processes have been certified according to ČSN EN ISO 9001:2009.

MANUFACTURING PROGRAMME DISTRIBUTION

HOME SERIES

HOME SERIES

Premium quality products made of quality materials. They are sold in retail shops, mainly in DIY chains and hardware stores.

First Aid Box

Kerosene lamps

Letter boxes

Stoves

Dustbins

Rodent traps

Openers

Trays

Shovels

Weapon lockers

Smoke accessories



PROFI SERIES

PROFI SERIES

It is a product line including products to be sold outside the retail market. These products are used for subsequent assemblies and completion of other products (furniture fittings, vent grill, grids, etc.) and products used in production processes (hanging cabinets, assembly stands, workshop cabinets).

Workbenches and cabinets

Storage cabinets

Food containers

Seats for tractors

Tool boxes

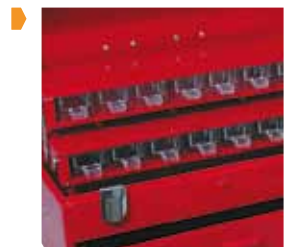
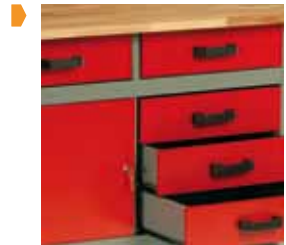
Storage boxes

Key boxes

Ventilation grids

Trestles

Furniture fittings



CUSTOMER SERVICE

To our business partners we offer:

- end-to-end services, from the proposal and production of the prototype tool up to the series production of the final product
- an individual approach to the whole customer range, from wholesalers to the small end consumer
- the possibility to receive news – product-related as well as technological – on the company's website or by e-mail



DISTRIBUTION

The distribution of MARS Svatka products is executed in various ways:

- domestic market through our wholesale distribution
- foreign markets by our subsidiary MARS Trading Praha, a.s

On demand we are able to arrange for the goods transportation to customers in the Czech Republic and in all of Europe.

We can offer transportation of both small packages and containers for overseas transportation.





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