

## 2024

# Tools for building electric machines **PUNCHING DIES**





# DONAK Energy · Technology · Excellence

## **PUNCHING DIES**



## **TOOLS AND DEVICE DEPARTMENT**

### **PUNCHING DIES:**

- ✓ 36 assortment groups of cutting dies: single, double, round, segmented, progressive (weight up to 10 tons).
- ✓ Cutting dies are made mainly for use on heavy presses (160-400 T), but also for use on smaller presses.
- $\checkmark$  Minimum die dimensions: 400 x 600 mm.
- ✓ Maximum die dimensions: 1490 x 2500mm.
- ✓ Precision possibility of cutting details within the "f" tolerance in accordance with DIN ISO 2768.
- $\checkmark$  High quality DONAKO is a manufacturer of elements mainly for the very demanding Energy industry.
- ✓ Short lead times adjusted to the customer's needs (standard lead time approx. 3 months).









## **OUR OFFER**

We produce all types of devices and tools used for large-scale production, as well as those requiring the assembly of many elements with high precision (e.g. stacking stator and rotor sheets with a diameter of several hundred mm to even several meters).

- ✓ We specialize in the design and production of equipment for the production of electrical machine stacks.
- ✓ We cooperate with our partners from the beginning of the project to the launch of series production.
- ✓ We have our own design and R&D office we are happy to share our technical experience with clients and advise how to optimize the cost.
- $\checkmark$  We offer tests of manufactured tools on site or at the customer's.
- ✓ We also regenerate and modify cutting dies, according to customer requirements (e.g. sharpening or replacement of cutting elements).

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## FACTORY







#### **DEPARTMENT OVERWIEW:**

- ✓ manufacturing area: 4 000 m2,
- $\checkmark\,$  extensive park of CNC and conventional machines.

#### Main equipment:

- ✓ AgieCharmilles Robofil 290P,
- ✓ AgieCharmilles 4030S,
- ✓ AgieCharmilles CUT 400,
- ✓ Sodick SLC 400G.

#### **Electrical Discharge Machining – wire cutting machines:**

- ✓ for cutting hard-to-machine steels, contour firing of punches and presses,
- $\checkmark$  maximum dimensions of workpieces: 800x550 x height 400mm.

#### Heat treatment of steel:

- ✓ annealing (annealing of welded structures, stress relieving, stabilising, etc.),
- ✓ max. workpiece dimensions: 1600 x 2400 x height 700mm,
- ✓ max. workpiece weight: 1000kg,
- ✓ heat treatment of small workpieces (max. Workpiece length 500mm),
- $\checkmark$  hardening of small workpieces made of structural and tool steels (e.G.
- ✓ C45, 42crmo4, NC11LV).

## **QUALITY AND CERTIFICATES**



We are holders of numerous certificates, which demonstrate the dependability of our company and attest to the high quality of the components we produce. Among the most important certificates we have gained are:

- certificate of conformity with the following standards: ISO 14001:2015, ISO 45001:2018, ISO
- ✓ 9001:2015 issued by LRQA Group Limited,
- ✓ welding certificate issued by SLV Berlin Brandenburg,
- ✓ welding certificate issued by Germanischer Lloyd,
- ✓ AEO certificate.

Our welders are certified to EN and ASME standards.





Our company has a supplier certification and control system which ensures the highest input quality.

In DONAKO we continuously perform quality checks during production through product parameter controls as well as welding and assembly precision tests.

#### Our test machines:

- ✓ CNC portal 3D measurement machine PRISMO Access 7 fitted with High Speed Scanning Zeiss Measurement Head,
- ✓ Fischer's Deltascope,
- ✓ Universal microscope,
- ✓ Franklin test,
- ✓ Epstein test,
- ✓ Trial ring (up to 19 meters outer diameter).

#### Welds and structures are tested through:

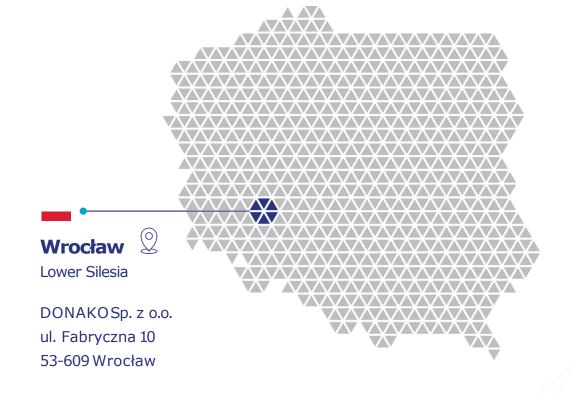
- ✓ Standard visual check (VT), magnetic particle (MT), dye penetrant (PT) and ultrasonic test (UT),
- ✓ Faro arm,
- ✓ Laser tracker.



## CONTACT

## Contact

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