#### **Further implemented technology solutions**



### Range of products and services of RASOMA

- Machine tools
- Special-purpose machines
- Automation solutions
- Services (consultancy, technology, customer service, maintenance etc.)



RASOMA double-spindle vertical turning centre DZS 250-2



RASOMA end-machining centres EBZ 250x1000

### Selected references for RASOMA

AD Steel Forge, D Anji Precision, China BMW, D Buderus Guß, D CMV, I Continental, D Daimler, D Daimler, USA Eifelwerk Gruppe, D Federal Mogul, D First Aquitaine (Ford), F Ford, GB Fräger, D Freudenberg, D General Motors, USA KOKI Technik, D Kordel, D KmB Technologie, D Küpper, D Lakshmi, Indien Linamar, D Mahle, D MAN Ferrostahl, D Mannesmannrohr, D MTS Minsk, BY Neumayer Tekfor, D NILES Simmons, D Opel, D Orsk Machine Building, RUS Visteon, USA Volkswagen, D VTF Group, CH



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## **Special**

## purpose Machines





since 19

**We offer solutions:** 

Machinery and technology.

Not only for the automotive industry!

# Implemented solutions Special-Purpose Machines

#### **Automation technology**



Special-purpose machine for machining of 2 balancing bores Ø20 on motorcycle crankshafts and for spot-facing without any extension of cycle time

Cycle time: 49 seconds



### Special-purpose machine for machining inner chamfer of piston rings

- automatic feeding, clamping, machining, removal
- high accuracy requirements

Cycle time: 6 seconds



## System for complete manufacturing of sintered plastic sealing rings for steering gear

- incl. forcing out of sintered mandrels
- incl. strain test
- incl. sorting parts into OK and NOK parts and PLC parts

Cycle time: 34 sealing rings in 60 seconds



### Double-spindle special-purpose machine DSP 450-2

#### Machining example - brake disks:

Position-oriented perforation of ventilated brake disks offering the following advantages:

- Automatic identification of different brake disks with different hole patterns
- Automatic turning of brake disk
- Identification of ventilation ribs
- No multi-spindle boring tool-holders required
- Tool wear and breakage monitoring

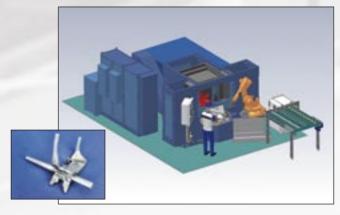
Cycle time: 49 seconds for 110 holes

#### Machining example - cone bearing rings:

Face turning and 12x drilling/threading M18x1.5 in large cone bearing rings

- Automatic identification and machining of pitch circles Ø100 to Ø170
- Tool wear and tool breakage monitoring

Cycle time: 61 seconds



### Special-purpose machine for precise three-side machining of shifter forks for car transmissions

- Production of sets (=3pieces)
- Extremely low permissible coaxiality and centre deviation

Cycle time: 24 seconds for one set



### Special-purpose machine for precise three-side machining of gearchange sleeves for car transmissions

- 2 motor spindles for Ø21N6, chamfer, plane side - 6-fold crown turret for Ø15.9, backward deburring,
- 6-fold crown turret for Ø15.9, backward deburring Ø16S6 and chamfering

Cycle time: 22 seconds



### Special-purpose machine for machining heads of up to 18m long mandrel bars

- Automatic feeding and removal of workpieces
- Robust design suited for use in rolling mills



### Special-purpose machine for machining of CNG cylinder necks

- Cylinder dimensions up to Ø400 and 2,500mm in length
- Cutting the length, core-hole boring, plain milling, outside and inside Ø, thread milling

#### Cycle time: <60 seconds

A machine is normally comprised of

- Three machining stations
- Gantry loader with two vertical units
- Turning station with integrated vaccuum cleaning system
- Hydraulic clamping station
- Chip conveyor
- CNC control Siemens 840D



Special purpose machine for machining of driving rings and joint shafts

Machining example driving ring:

cycle time for drilling, fine drilling and turning of security ring grooves:

85 seconds