

**kondia**

- **2 Production plants in ELGOIBAR – 12.800 m<sup>2</sup>**
- **Staff of 75 highly qualified**



- **Member of AFM**
- **Member of NER GROUP**
- **Collaborator of Technology Centers: IDEKO and LORTEC.**

## **We cover the developmet of all the project :**

- ***Design.***
- ***Manufacturing and machining of the main pieces of the machine assembly.***
- ***Assembly, starting up of the machine and reception.***
- ***After Sale service and maintenance contracts..***



kondia



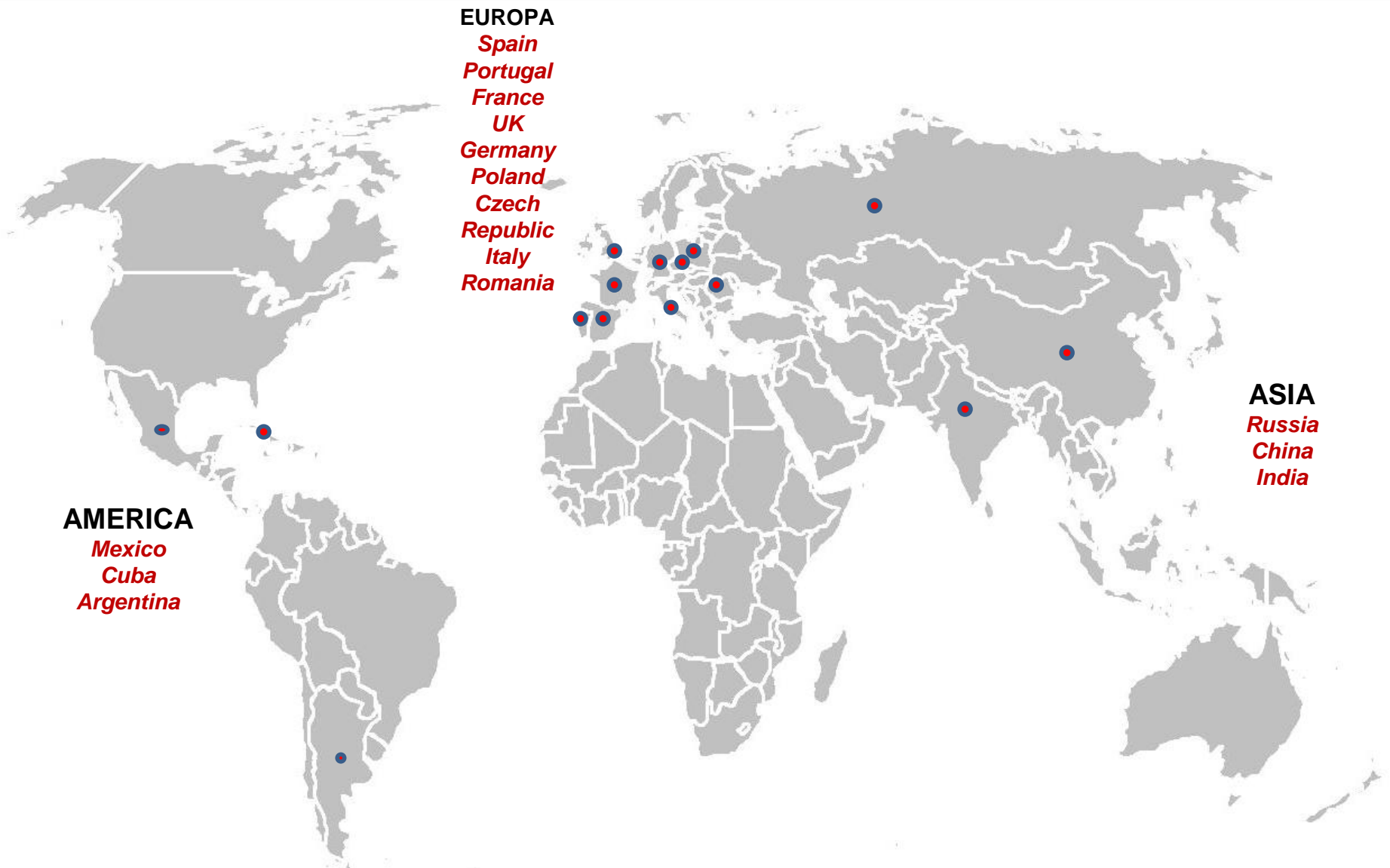
*A perfect union...*

*...your solution*





# KONDIA in the world





<b>Special Machines Turn Key Projects</b>	<b>CVJ</b>
	<b>Ball &amp; Housing</b>
	Injection pump
	<b>Rotation Friction Welding machine</b>
	Bearings
	Rear shafts of trucks and vans
	Any other special work-piece

Machining Centers	Vertical	Moving Table	3, 4 or 5 axis CNC
		Portal Type	
		Moving Column	
		High Precision	
		Special Machines	
	Horizontal	With two work-posts	
		With 12 pallets magazin	
		Special	

**Retrofitting of all type of machines**



# GERMANY – SPECIAL MACHINES

## Representation, distribution and service



Georg Becker  
Werkzeugmaschinen

Mr. Hasso Georg Becker  
60325 Frankfurt am Main



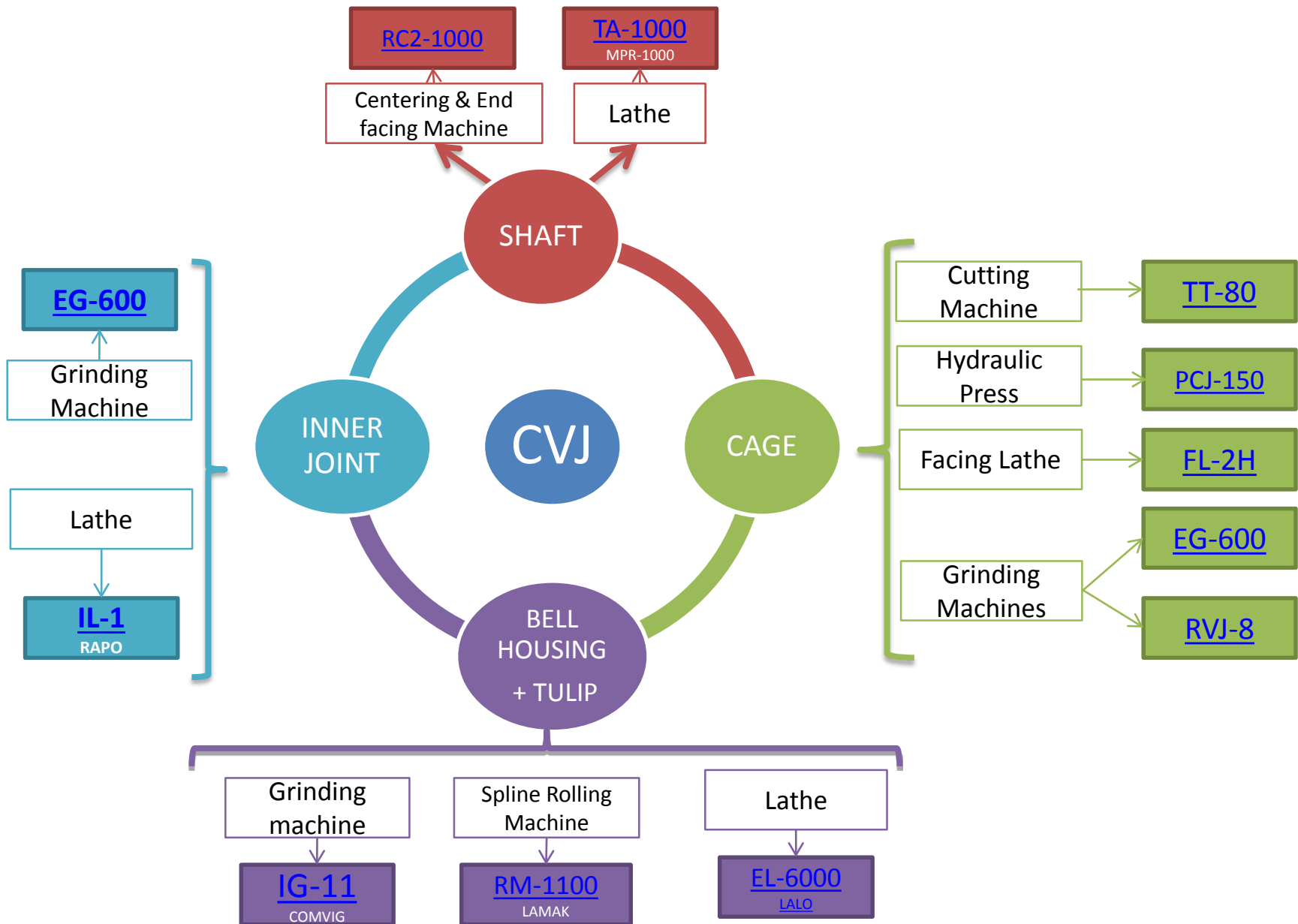
Dr.-Ing. Luis Carazo  
Kontaktbüro  
99423 Weimar

**RETROFIT**  
**VERBUND**

Mr. Andreas Zumbach  
07426 Königsee

# **SPECIAL MACHINES FOR AUTOMOTIVE SECTOR**

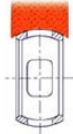
Technical Index Cards



### DESCRIPTION & OPERATIONS

CNC external grinding machine with automatic loading / unloading system

External grinding machine for cage or inner race



### GENERAL & TECHNICAL CHARACTERISTICS

- Machine suited for integration in cell or individually with or without post process.
- High frequency spindle for wheel head
- Max. wheel diameter: 600mm
- Dresser types: blade type plain / formed / radius. Diamond discs formed / cup type
- Inspection: pre-process / in process & post process
- Clamping system: chucks / membrane / pneumatic / collets
- Load & unload time: 3.5"



### DESCRIPTION & OPERATIONS

CNC lathe with automatic loading / unloading system of parts

Internal turning of inner race

### TECHNICAL & GENERAL CHARACTERISTICS

- Machine can be operated independently or in a cell combination with or without post processing

#### Spindle power

- Work spindle: 20 kW

#### Speeds & feeds

- Carriage feeds: 30 m/min
- Max. Spindle rpm: 4500 rpm

#### Axis travels

- X axis: 325 mm
- Z axis: 280 mm

#### Timings

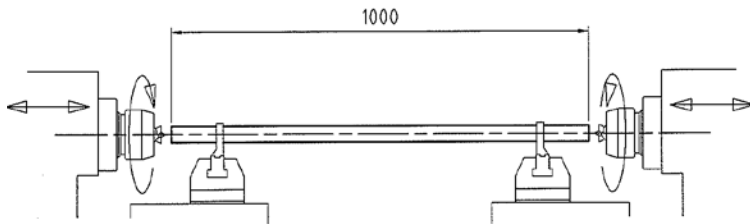
- Cycle time depends on the type of part loaded
- Loading time: 3.3"





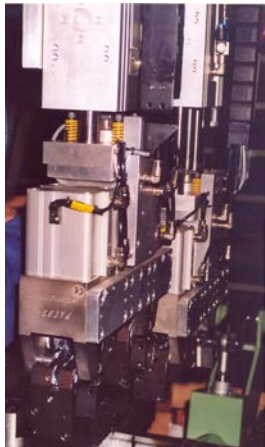
## DESCRIPTION & OPERATIONS

Centering and end facing special purpose machine

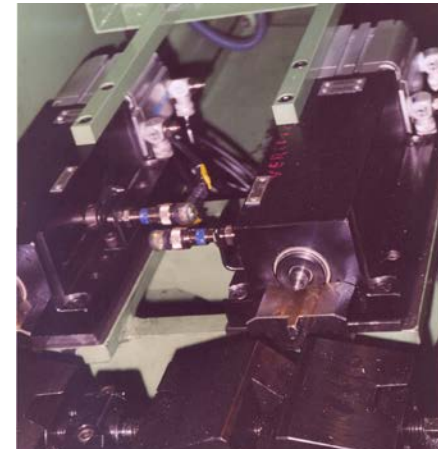


## TECHNICAL CHARACTERISTICS

- Machining of shafts two by tow.
- Simultaneous machining of four ends
- Maximum length of the shaft 1000 mm
- Double handler portic
- Postprocess for checking of:
  - Length of shaft
  - Correct machining of the centering point
  - Complete cycling time for two parts 19.5 s



Detail for the  
portic handler

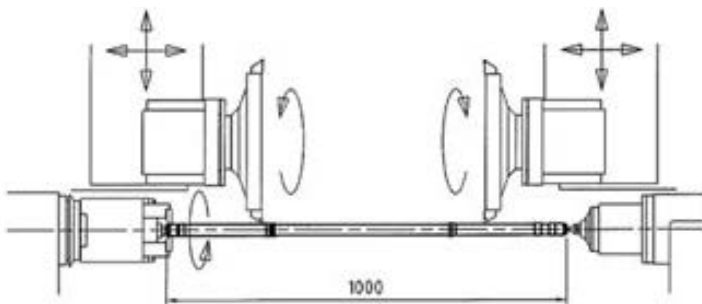


Detail of one of the postprocess tester



### DESCRIPTION & OPERATIONS

CNC lathe for shaft machining spindle with automatic loading / unloading system of parts



### TECHNICAL CHARACTERISTICS

#### Power

- Headstock power 15Kw

#### Feeds

- Max. Spindle rpm: 3500rpm

#### Timings

- Cycle time depends on the type of part loaded
- Loading / unloading time: 7"

#### Piece dimensions

- Maximum length of the shaft: 1000 mm



### GENERAL CHARACTERISTICS

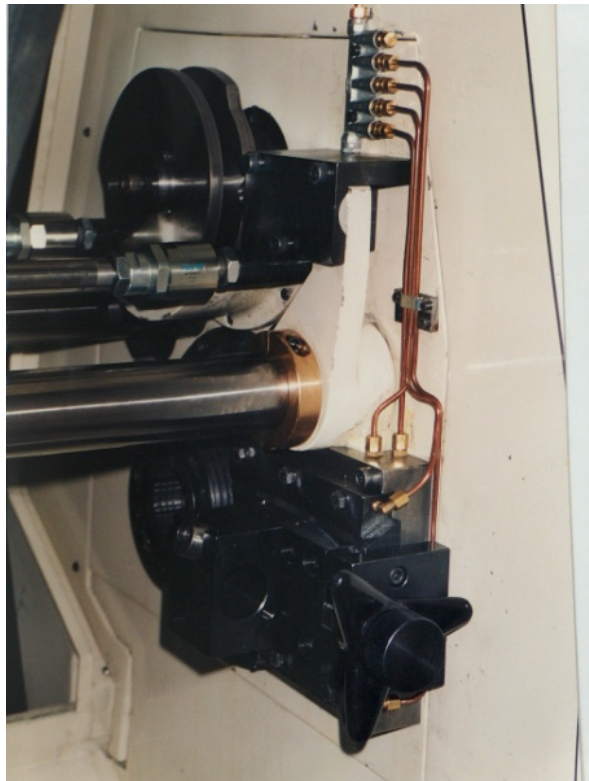
- Machine suited for integration in cell or individually with or without post process.
- Double turret with tools
- Four axes CNC
- Two steady rest
- Tailstock
- Fixture & clamping systems to suit the part



## DESCRIPTION & OPERATIONS

Tube cutter

Parting of tubes and shearing of tubes (cage)



### Speed & Feeds

- Feed rate of axes: 10 m/min.
- Max. speed of spindle: 880 rpm
- Max speed of saw spindle: 13 rpm

### Timing

- Cycle time for one shear cycle: 6 to 7 "

### GENERAL CHARACTERISTICS

- Machine suited for integration in cell or individually with or without post process
- Max diameter of tube : 80 mm
- Max length of tube: can be defined



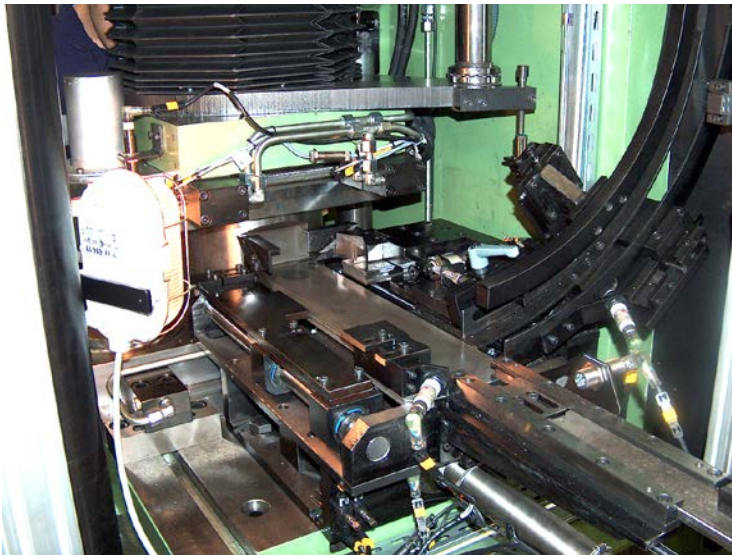


### DESCRIPTION & OPERATIONS

Cage forming press with automatic loading & unloading system

### TECHNICAL CHARACTERISTICS

- Maximum thrust force 150 TM.
- Machine adapted to operating in a cell or on its own with or without postprocessing.
- Cycle time 5 "



Detail view of the automatic loader



**DESCRIPTION & OPERATIONS**

CNC lathe for turning cage's interior face

**TECHNICAL CHARACTERISTICS****Spindle power**

- Work spindle: 11 kW

**Speeds & feeds**

- Axis feed rate: 20 m/min
- Max. Spindle rpm: 2500 rpm

**Chuck diameter**

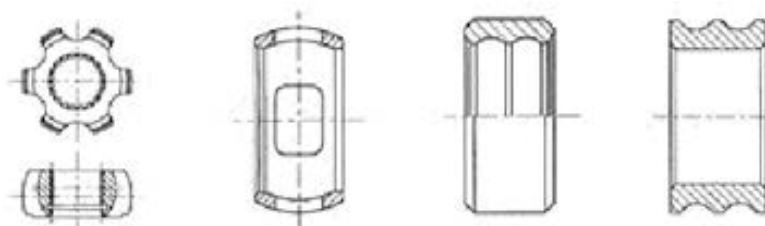
- Max. Chuck diameter 300mm

**Timings**

- Cycle time depends on the type of part loaded
- Loading time: 4.75"

**GENERAL CHARACTERISTICS**

- Machine can be operated independently or in a cell combination with or without post processing
- Four axes CNC
- Different loading systems: CNC loader arms, CNC gantry, Cams
- Turret with tools in tandem
- With or without hydraulic tailstock
- System for quick change of different types of components

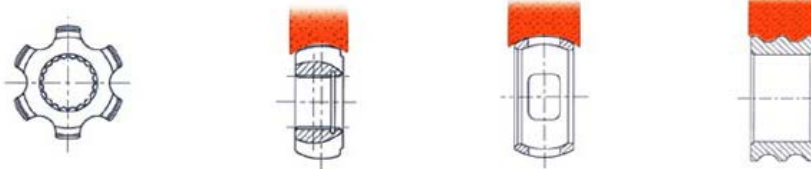




### DESCRIPTION & OPERATIONS

CNC external grinding machine with automatic loading / unloading system

External grinding machine for cage or inner race



### GENERAL & TECHNICAL CHARACTERISTICS

- Machine suited for integration in cell or individually with or without post process.
- High frequency spindle for wheel head
- Max. wheel diameter: 600mm
- Dresser types: blade type plain / formed / radius. Diamond discs formed / cup type
- Inspection: pre-process / in process & post process
- Clamping system: chucks / membrane / pneumatic / collets
- Load & unload time: 3.5"



## DESCRIPTION & OPERATIONS

Windows land grinding machine of cage simultaneously with six or eight spindles

CNC gantry loading systems

## TECHNICAL & GENERAL CHARACTERISTICS

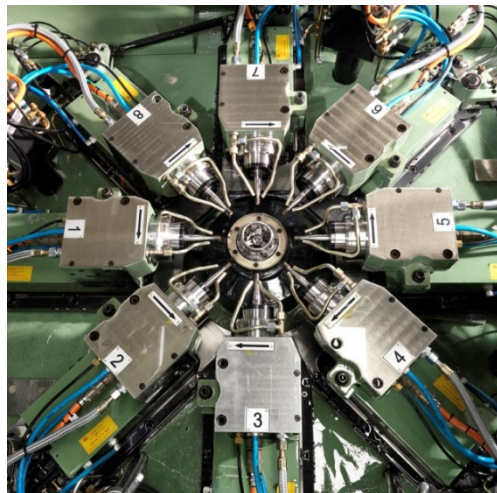
- Machine can be operated independently or in a cell combination with or without post processing

### Power

- Work head power (*rotating base*) 7.3Nm.
- Work head power (*vertical movement*) 7.3Nm.
- High Frequency Spindle 9.3Nm. Max. 4000rpm

### Timing (depending on the piece)

- Cycle time
- Cycle time with dressing time
- Grinding time



### DESCRIPTION & OPERATIONS

CNC grinding machine for trucks and sphere the bell housing

Internal grinding of spherical tracks (grinding two by two parts)

### TECHNICAL CHARACTERISTICS

#### Power

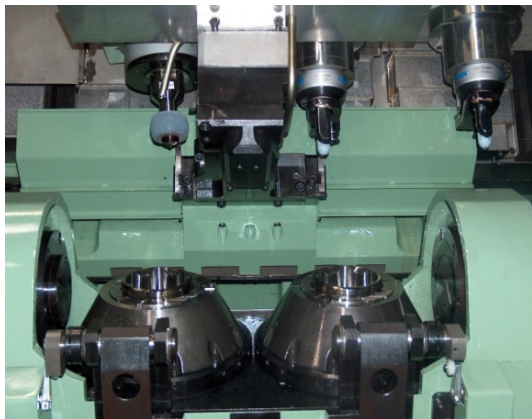
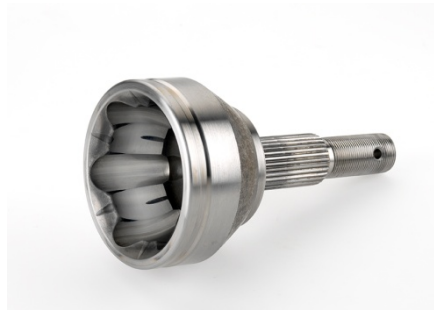
- Work head torque: 113Nm
- Power of high frequency spindle (2 for tracks and 1 for profile) 5 Nm

#### Speeds & feeds

- Work head rpm: 495 rpm.
- High frequency wheel head rpm max.: 4500 rpm

#### Timings

- Cycle time depends on the type of part loaded
- Loading time: 7.9"



### GENERAL CHARACTERISTICS

- Machine suited for integration in cell or individually with or without post process.
- 10 axes CNC.
- Diamond dressing.
- Loading and unloading parts by CNC gantry loader.
- Anti fire system.





### DESCRIPTION & OPERATIONS

Spline milling of spindle with automatic loading & unloading of component



### TECHNICAL & GENERAL CHARACTERISTICS

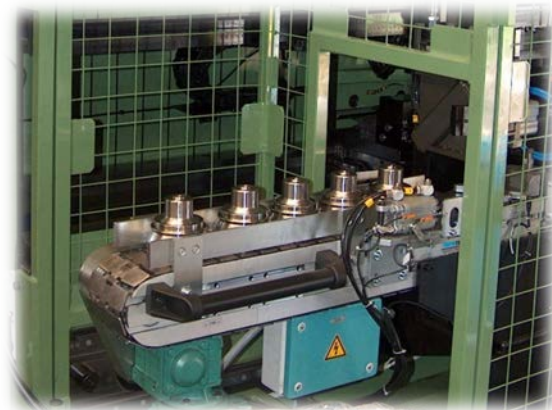
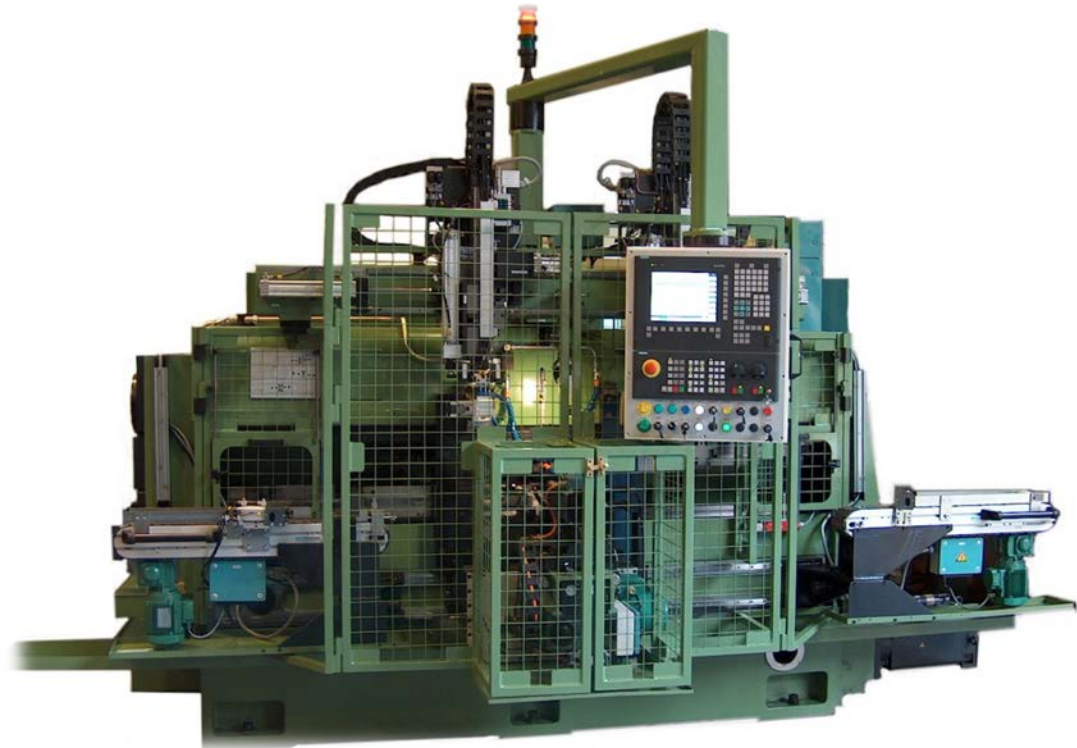
- Machine suited for integration in cell or individually with or without post process.

#### Timing

- Load/ unload times: 8"

#### Axes

- 3 CNC controlled axes



## DESCRIPTION & OPERATIONS

CNC lathe with automatic loading / unloading system of parts by CNC gantry system or CNC loader

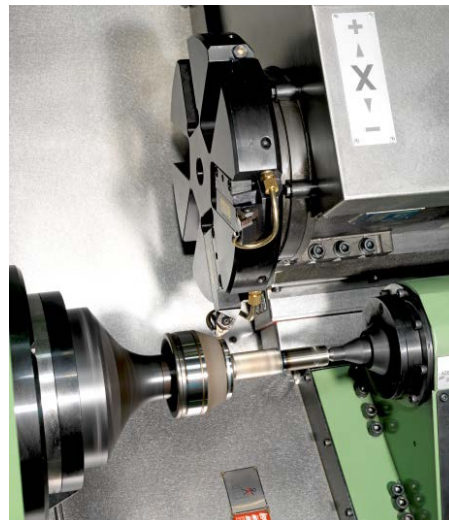
External turning of bell housing and tulip

Parts are machined both untreated and tempered, replacing thereby the grinding operation



## GENERAL CHARACTERISTICS

- Machine can be operated independently or in a cell combination with or without post processing
- Two or four axes
- Different loading systems – CNC loader arms, CNC gantry
- Turret with tools in tandem
- CNC: Fagor / Fanuc / Siemens
- System for quick change of different types of components
- Hydraulic tailstock



## TECHNICAL CHARACTERISTICS

### Spindle power

- Work spindle: 200 Nm

### Speeds & feeds

- Carriage feeds: 20 m/min
- Max. Spindle rpm: 6000 rpm

### Chuck diameter

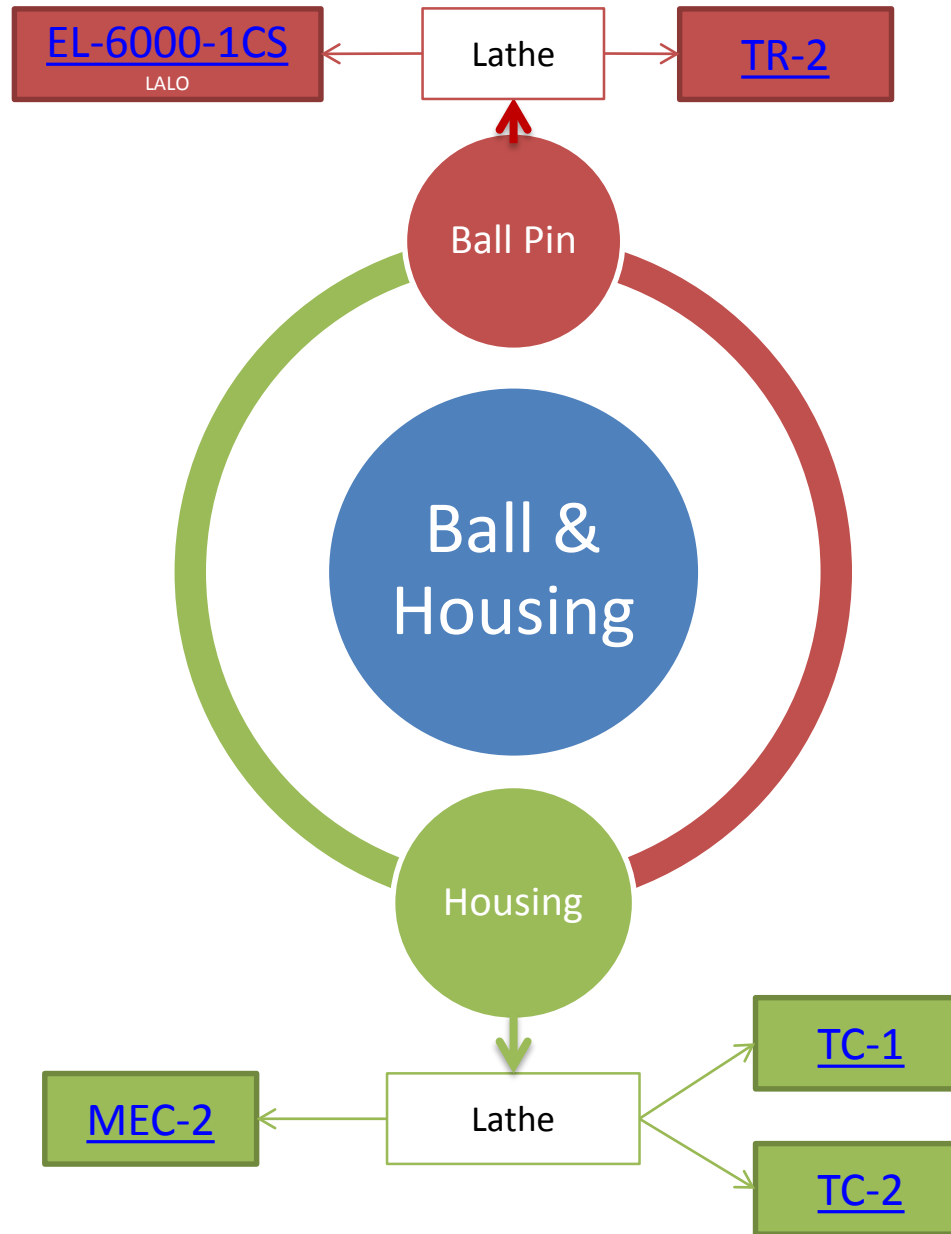
- Max. Chuck diameter 300mm

### Timings

- Cycle time depends on the type of part loaded
- Loading time: 4.5"









## GENERAL CHARACTERISTICS

- Machine can be operated independently or in a cell combination with or without post processing
- Two or four axes
- Different loading systems – CNC loader arms, CNC gantry
- Turret with tools in tandem
- CNC: Fagor / Fanuc / Siemens
- System for quick change of different types of components
- Hydraulic tailstock

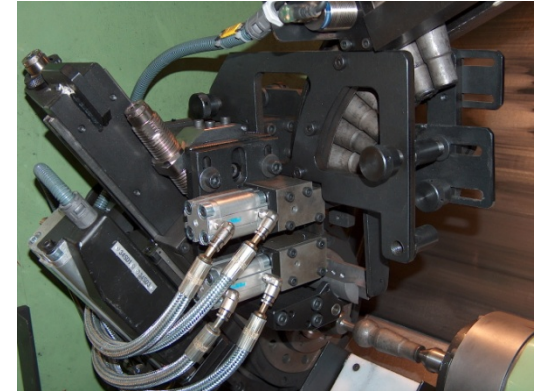


## DESCRIPTION & OPERATIONS

CNC lathe with automatic loading / unloading system of parts by CNC gantry system or CNC loader

Turning of the body of the ball-socket joint

Parts are machined both untreated and tempered thereby replacing the grinding operation



## TECHNICAL CHARACTERISTICS

### Spindle power

- Work spindle: 200 Nm

### Speeds & feeds

- Carriage feeds: 20 m/min
- Max. Spindle rpm: 6000 rpm

### Chuck diameter

- Max. Chuck diameter 300mm

### Timings

- Cycle time depends on the type of part loaded
- Loading time:
  - Gantry: 6.6"
  - Spoon: 2"

## DESCRIPTION & OPERATIONS

CNC lathe for socket with automatic loading and unloading

Ball-socket joint full turning

## TECHNICAL CHARACTERISTICS

### Speeds & feeds

- Axis feed rate: 20 m/min
- Max. Spindle rpm: 6000 rpm

### Chuck diameter

- Max. Chuck diameter 200mm



## GENERAL CHARACTERISTICS

- Machine can be operated independently or in a cell combination with or without post processing
- Two or four axes CNC
- Different loading systems: CNC loader arms, CNC gantry, Cams
- Turret with tools in tandem
- Hydraulic or CNC tailstocks
- System for quick change of different types of components

## DESCRIPTION & OPERATIONS

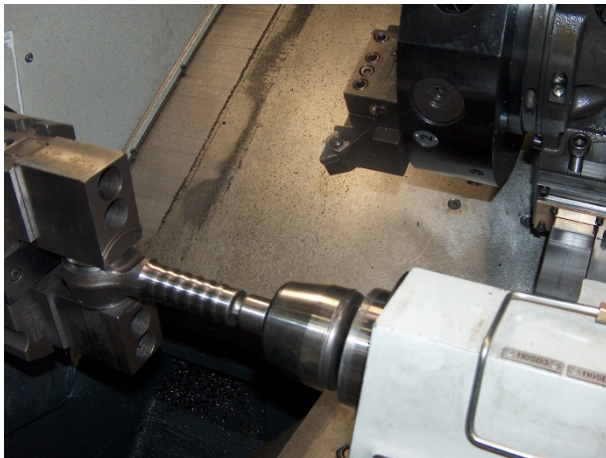
Double lathe of sockets with tailstock.  
Manual loading and unloading.

External turning of the socket's tail.

## TECHNICAL CHARACTERISTICS

### Speeds & feeds

- Axis feed rate: 15 m/min
- Max. Spindle rpm: 3000 rpm



## GENERAL CHARACTERISTICS

- Machine can be operated independently or in a cell combination with or without post processing
- Four axes CNC
- Turret with tools in tandem
- With hydraulic tailstock
- Spindles with regulated stops



## DESCRIPTION & OPERATIONS

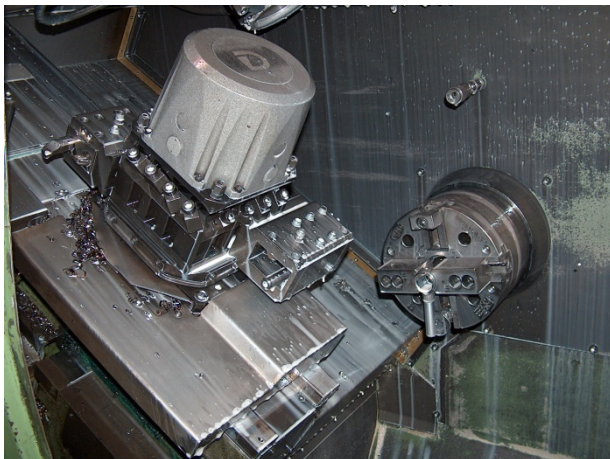
Double lathe of sockets without tailstock.  
Manual loading and unloading.

Internal and external turning of the socket's head.

## TECHNICAL CHARACTERISTICS

### Speeds & feeds

- Axis feed rate: 15 m/min
- Max. Spindle rpm: 3000 rpm



## GENERAL CHARACTERISTICS

- Machine can be operated independently or in a cell combination with or without post processing
- Four axes CNC
- Turret with tools in tandem
- Spindles with regulated stops



## DESCRIPTION & OPERATIONS

Special machine for sockets machining

Internal and external machining of the head and the tail



## GENERAL CHARACTERISTICS

- Two workpieces are machined while other two are manually loaded and unloaded
- Nine CNC axes
- Two machining units. Each one with its own ATC
- CNC: Fagor / Fanuc / Siemens

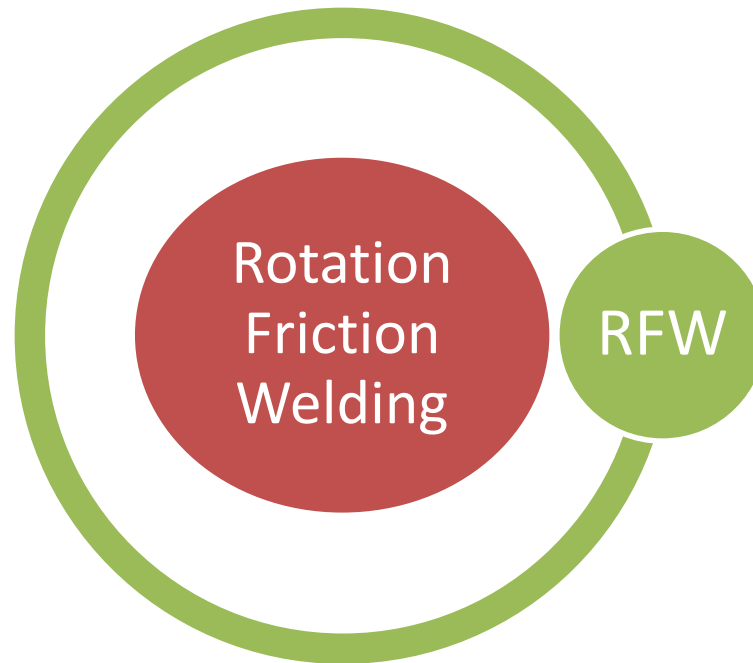
## TECHNICAL CHARACTERISTICS

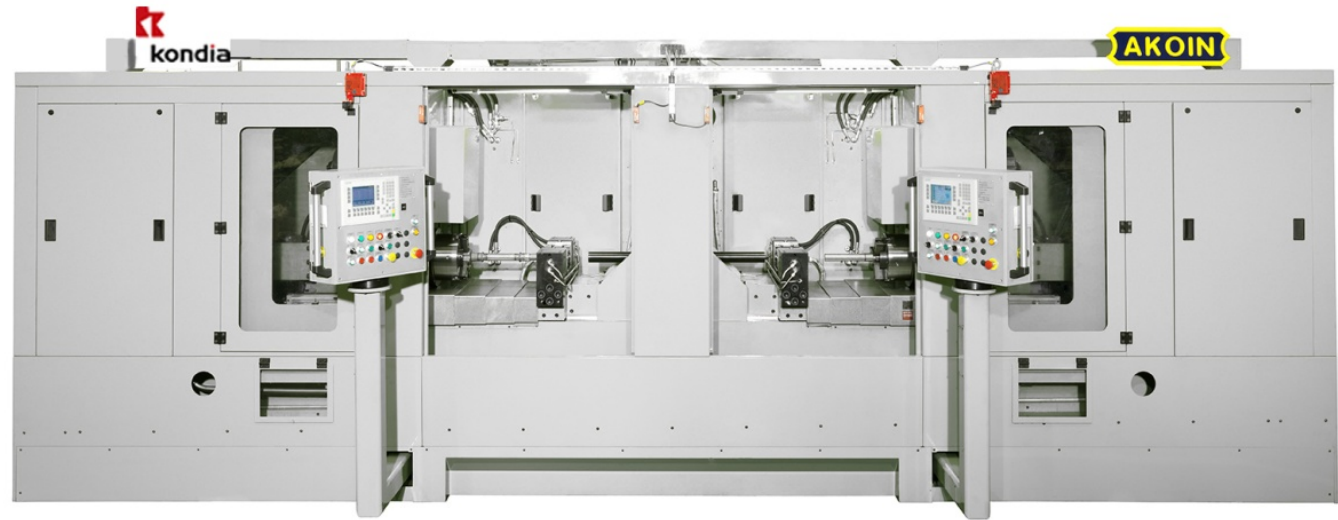
### Spindle power

- Work spindle: 60 Nm

### Speeds & feeds

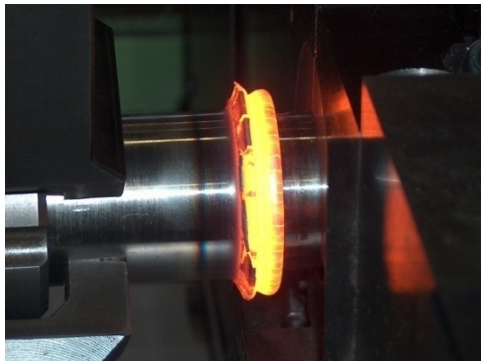
- Carriage feeds: 30 m/min
- Max. Spindle rpm: 3000 rpm





## GENERAL CHARACTERISTICS

- The machine can be operated independently or in a cell combination
- Loading and unloading parts manually, via robot or CNC gantry
- Removing of the joint flash by shearing or turning
- One or two work station



# Customers Automotive parts



LEMFÖRDER 



Wir leben Autos.

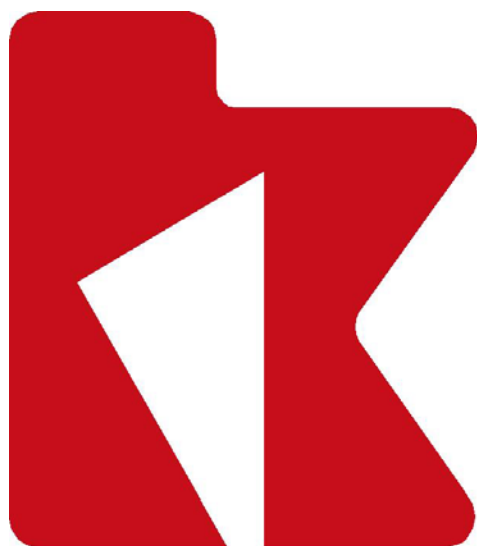


Das Auto.



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# kondia