simply genius

Handling with system

Chameleon

Handling with system – Processes with security

Anyone who wants to ensure economic efficiency and competitiveness of their company, will not get beyond an optimisation of process flow. Maybe some individual manual operations will never quite be dispensable: but a continuously high process quality and security can only be achieved by automated handling. Our handling system *Chameleon* reveals its full proficiency in the intelligent control of various process steps.

The linear robot system enables individual planning of your specific procedures. In modular construction, you can arrange an FMC (Flexible Manufacturing Cell) that fits to your requirements, step by step. In this way you will achieve process security and shorter processing times with better results.

The integration of available units and systems is also possible as well as the connection to machines with different technologies (measuring, milling, eroding).

Cross-process fully automated – FMC Flexible Manufacturing Cell

Milling machines Röders RXP 500 Yasda YBM 640V

HSC milling machine for the automatic processing according to priorites. The operation of milling machines is controlled by our software tool JOB*zuk* and performed by *Chameleon*.

2 EDM cavity sinking machines *genius* 700

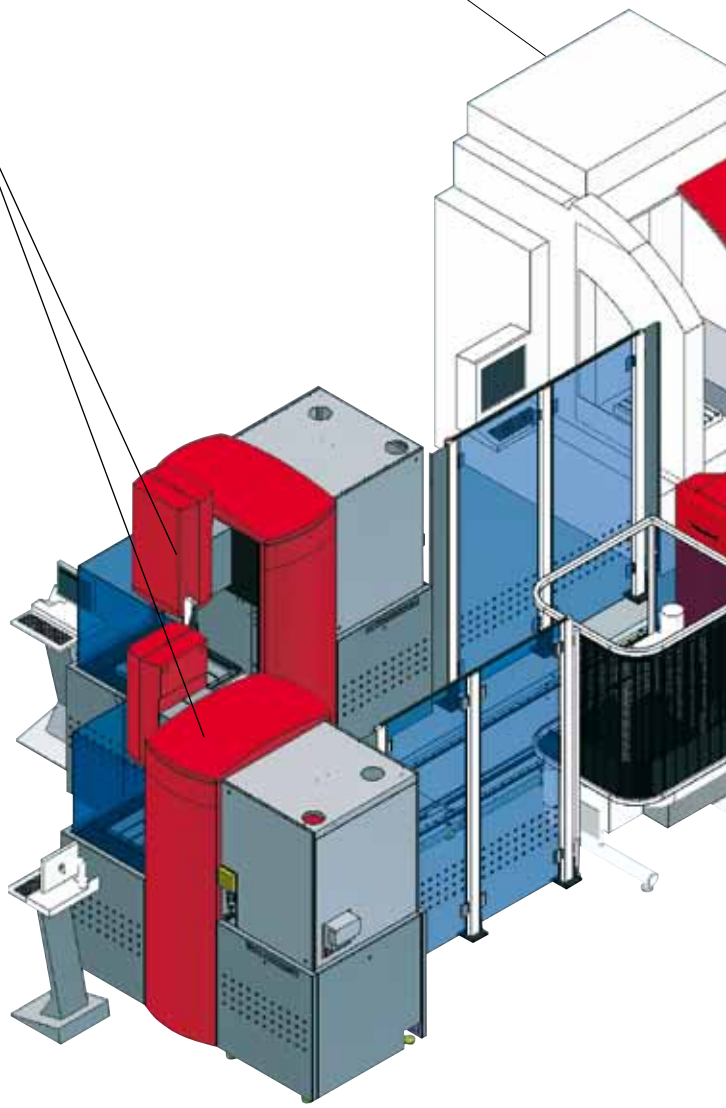
Left and right adaptable.

EDM cavity sinking machine

- high traverse speed
- highest precision in difficult eroding processes.

Zero point clamping system

All clamping systems within the system are controlled and fitted by the robot. All customary clamping systems can be applied.

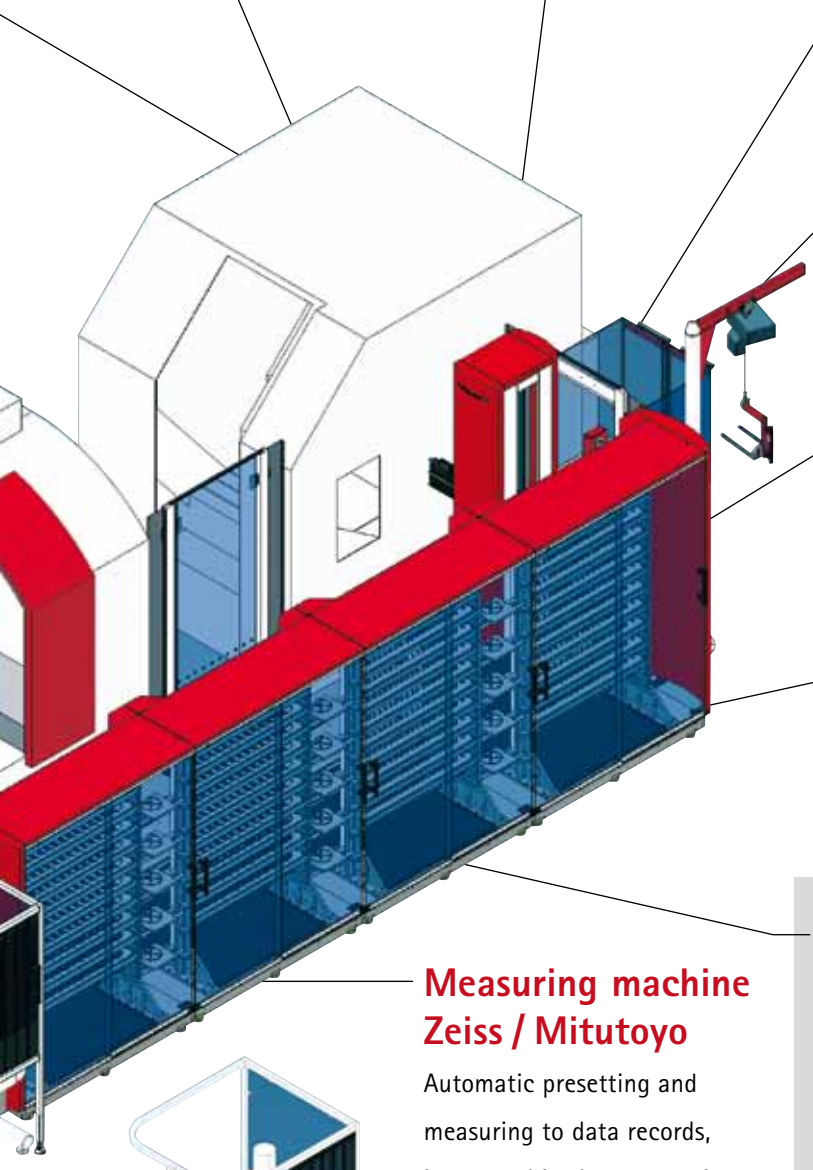


ITS twin gripper

Flexible exchange gripper system applicable for almost all clamping systems.

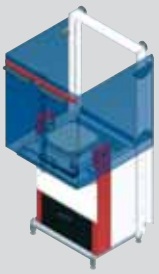
Chameleon robot

Linear robot system with its own control; moveable on up to 5 axes; transfer weight up to max. 125 Kg.



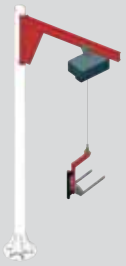
Transfer and cleaning station

Loading and unloading of pallets; manual cleaning of workpieces.



Loading crane

Electric crane for heavy workpieces; pivoted; mounted its own stable support.



Rotating station

Automatic rotating and pivoting of electrodes for various processes.

Loading drawer

Loading and unloading of workpieces; extractable, mounting in the intermediate magazines.

Measuring machine Zeiss / Mitutoyo

Automatic presetting and measuring to data records, integrated in the automatic process flow.

Magazine shelves for electrode components and milling tools

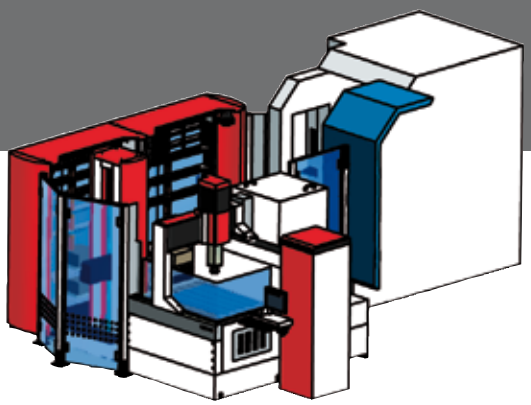
As an example for

- optional: HSK 25, HSK 40, HSK 50, HSK 63
- EROWA ITS 15
- PARTOOL Power-Grip 2er

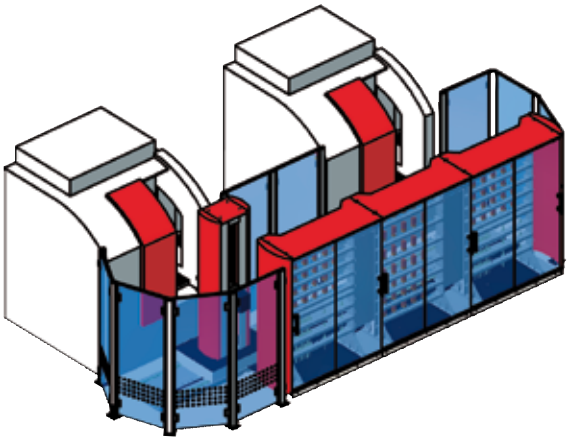
and all established clamping systems.

It can hardly be easier – Modular according to your desire

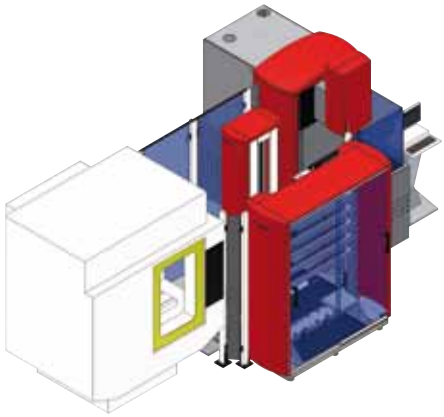
Examples of realised FMC.



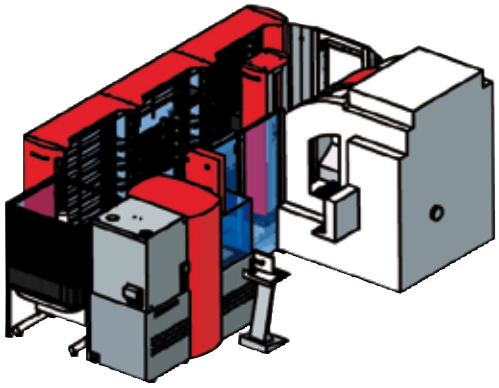
Chameleon with 2 magazines; *genius* 1200; Röders RHP 800; rotating and turning device; Configuration electrodes, workpieces, milling tools: 120 pcs. EROWA ITS; 12 pcs. EROWA UPC; 34 pcs. HSK 40



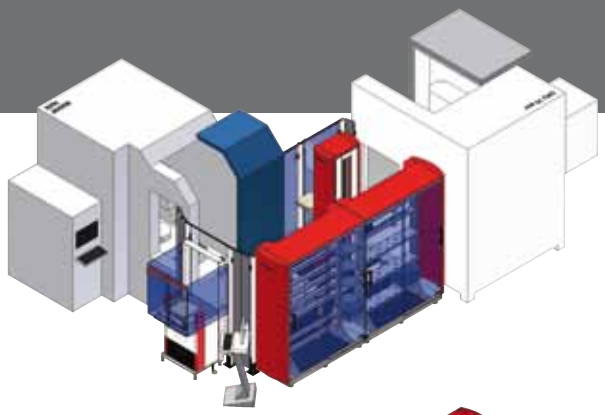
Chameleon with 3 magazines; 2 Röders RXP 500; Configuration electrodes and milling tools: 250 pcs. EROWA ITS, 136 pcs HSK 40



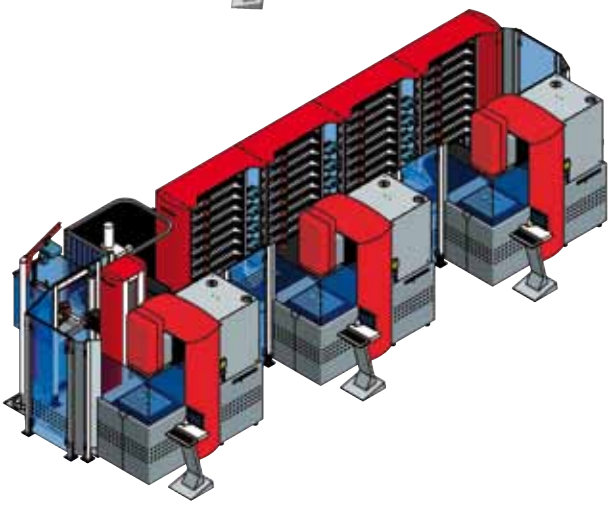
Chameleon with 1 magazine; *genius* 700; Fanuc Robodrill T21iE; Configuration electrodes and workpieces: 90 pcs. 3R Macro; 3 pcs. 3R Dynafix



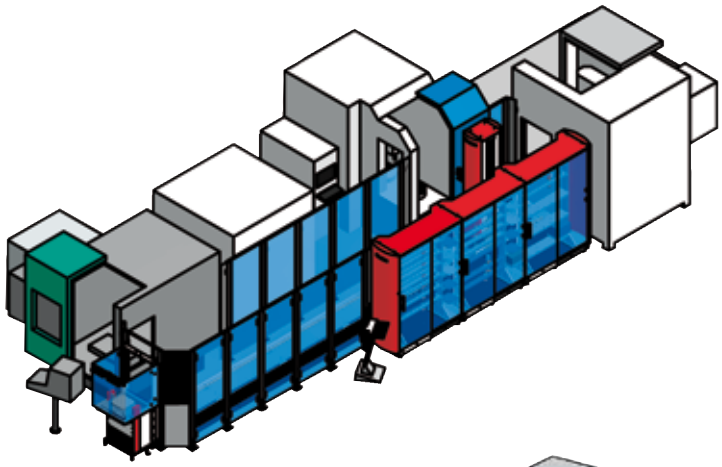
Chameleon with 3 magazines; *genius* 700; Röders RXP 300; Measuring machine Mitutoyo Crysta CNC; Configuration electrodes, workpieces, milling tools: 150 pcs. Electrodes ITS; 18 PARTOOL Power-Grip 2-fold; 72 pcs. HSK 25



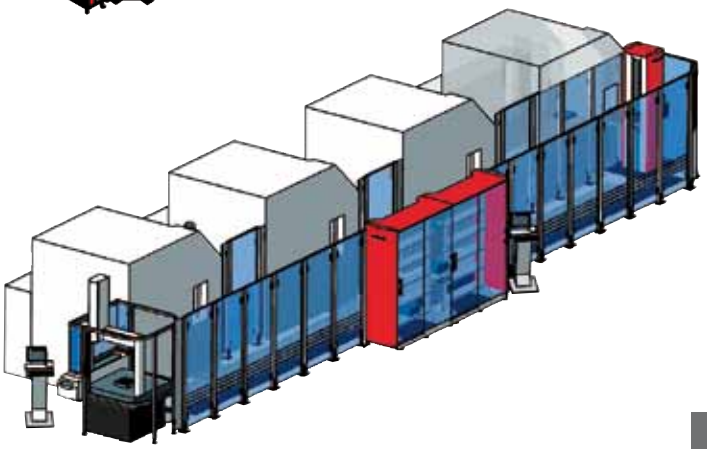
Chameleon with 2 magazines; Deckel DMU 50 evo; Röders RP 600 DS; Preparation for measuring machine; Loading station; Configuration electrodes, workpieces, milling tools: 60 pcs. EROWA ITS; 14 pcs. UPC; 102 pcs. HSK 40



Chameleon with 4 magazines; 3 x *genius* 700; Measuring machine Zeiss Vista; Loading station with crane; Rotating station; Configuration electrodes and workpieces: 540 pcs. Erowa ITS; 10 x PARTOOL Power-Grip 2-fold; 5 x PARTOOL Power-Grip 4-fold



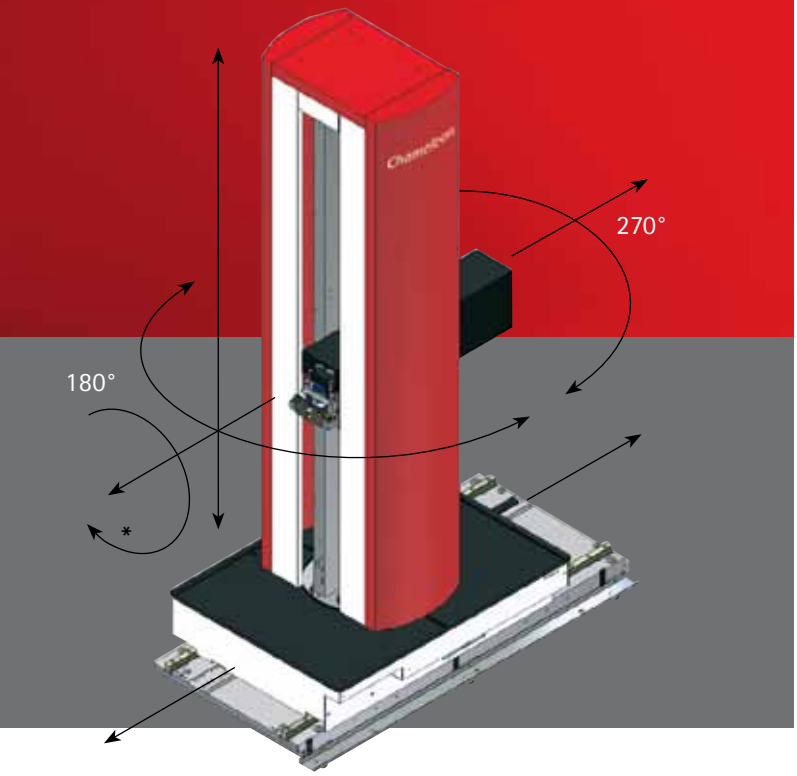
Chameleon with 3 magazines; Deckel DMU 50 evo; Röders RP 600 DS; Deckel DMU 70 evo; Preparation for measuring machine; Loading station; Configuration electrodes, work-pieces, milling tools: 165 pcs. EROWA ITS; 19 pcs. UPC; 102 pcs. HSK 40



Chameleon with 2 magazines (total rail-length 15,70 m); 3 x milling machines YASDA 640V; 1 x further milling machine as preparation; Measuring machine Zeiss Contura; loading drawer; Configuration workpieces: 30 pcs. EROWA UPC

Core piece on rails

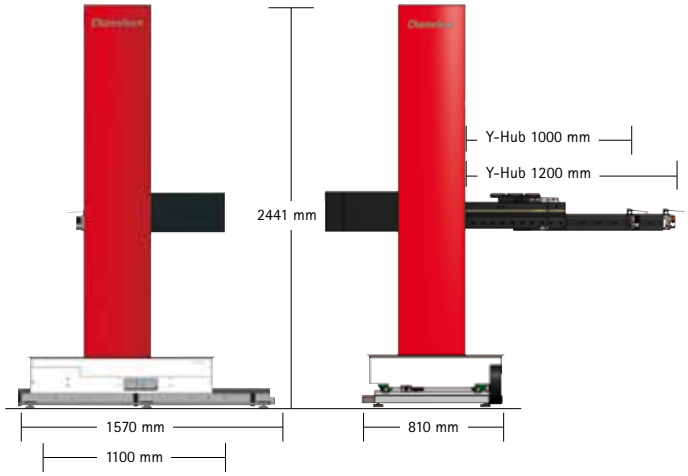
The *Chameleon* can move within the whole FMC on an upgradeable rail system. The intelligent control enables efficient solutions while controlling every individual processing station.



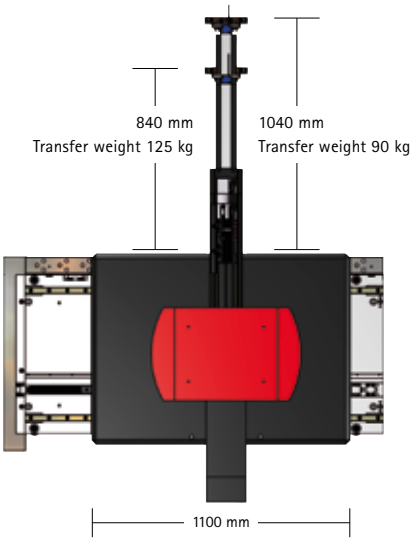
* Options rotatable gripper (see page 10)

The movement of the *Chameleon* robot
C-Rotation 270°

Required space for different arm lengths

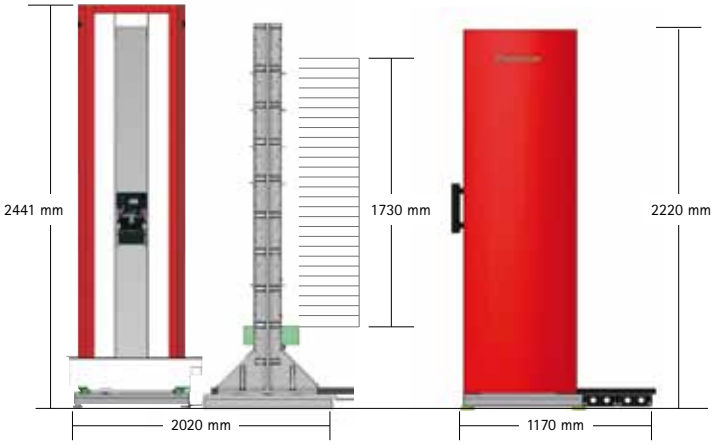


Robot top view for different arm lengths



Required space for 1 robot and 1 magazine

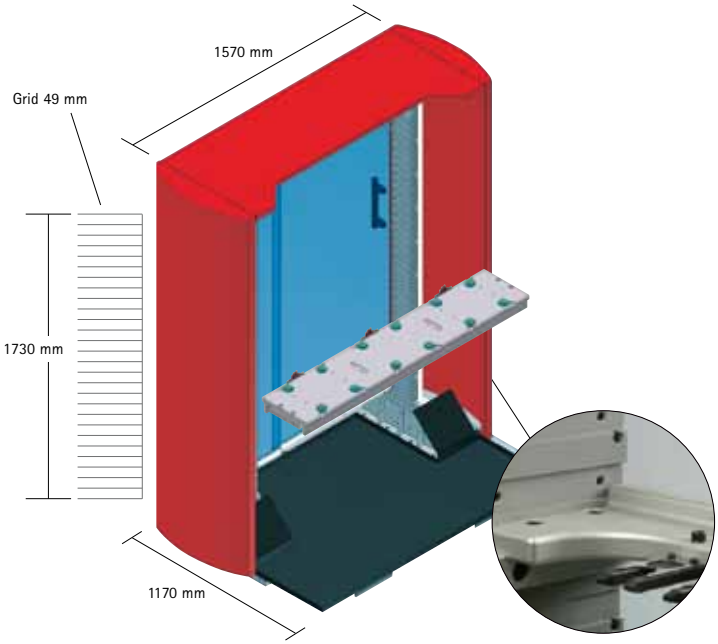
Required space for 1 magazine



Order with system – Magazines and magazine shelves

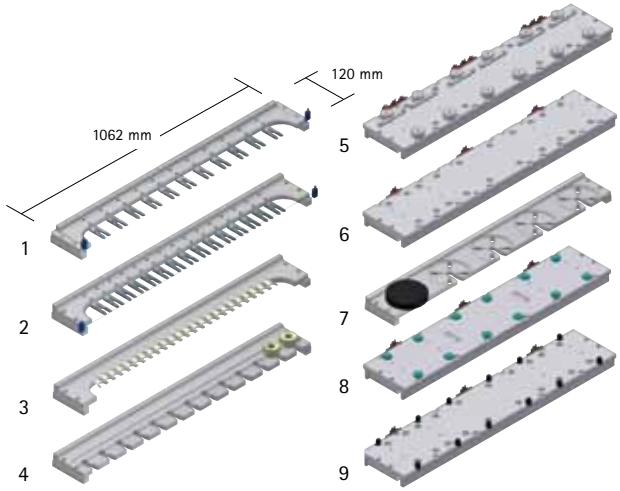
Flexible racking system

The grid makes individual and demand-tailored magazine distribution possible. The mixing of electrodes, components and tools within a magazine is unlimited. The number of magazines can be extended according to electrode/component requirements (see fig. 1 below – magazine).



Magazine shelves

Whatever has to be administrated and deposited, we have an appropriate shelf for every clamping system.

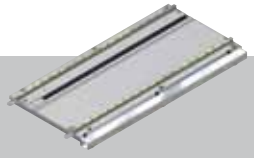


1 Electrode level 11 pcs.
2 Electrode level 15 pcs.
3 optional:
HSK 25, 24 pcs.
HSK 40, 17 pcs.
HSK 50, 14 pcs.
HSK 63, 12 pcs.
4 EROWA PM System
5 PARTOOL Power-Grip double
6 EROWA UPC pallet level
7 EROWA PowerChuck 148
8 3R Dynafix pallet level
9 Mecatool GPS 240

Single magazine

Two single magazines including extension by intermediate magazine positions

Mounted casing (size: 900 mm x 2100 mm)



Guide rail extension, length: 1570 mm (can be adapted to each magazine length)

Everything under control – Pallets, Grippers and Chucks

Clamping systems

EROWA ITS

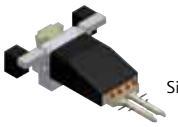
3R Macro

Pallets

EROWA ITS Electrode

3R Macro electrode

Replacable gripper systems


Single gripper

Gripper options

Double gripper

Rotatable gripper 90°

Rotatable gripper 180°

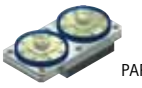
EROWA PowerChuck

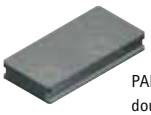
Prepallet PowerChuck

EROWA
PowerChuck pallet

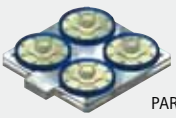
PowerChuck
single gripper

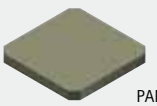
PowerChuck
double gripper

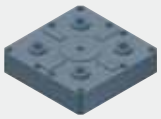

PARTOOL
Power-Grip double


PARTOOL Power-Grip
double pallet

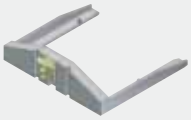
Gripper for PARTOOL
Power-Grip double

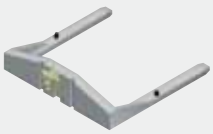

PARTOOL
Power-Grip quadruple


PARTOOL Power-Grip
quadruple

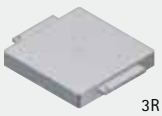

EROWA UPC

EROWA UPC pallet


Gripper for PARTOOL
Power-Grip quadruple,
UPC, Dynafix


Oversize gripper
500 mm x 450 mm

3R Dynafix


3R Dynafix pallet

Chameleon works with all established clamping systems.

Pallet size: 500 x 500 mm and 400 x 600 mm.

For every requirement – Accessories and Options

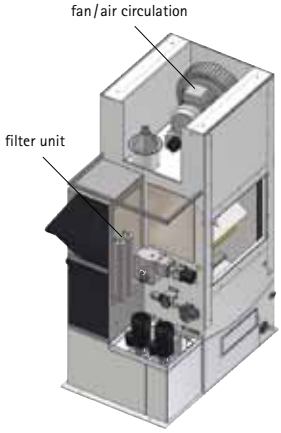
Flexibility that makes more of your process.

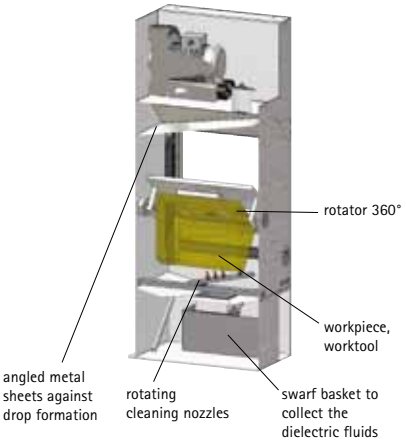
1

Transclean

A clean matter ...

...with the automatic cleaning station *Transclean*. After milling, *Chameleon* will bring the contaminated electrodes or workpieces to the cleaning station. They will be cleaned and dried there, before they are sorted into the magazine. A clean process for more quality.





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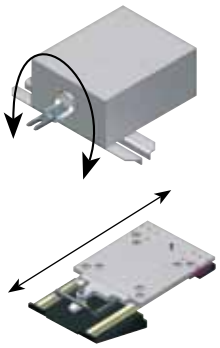
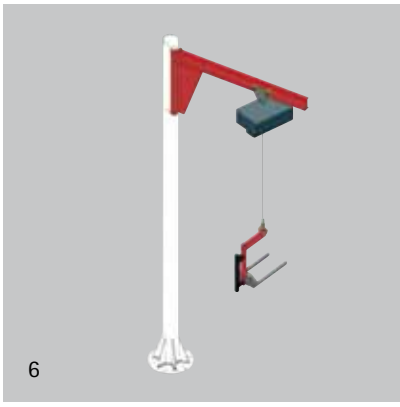


4 5



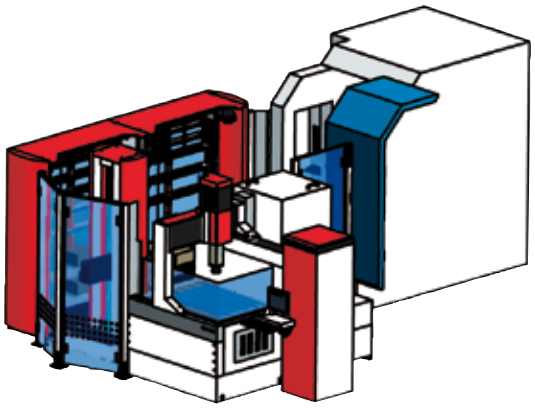
6

1 *Transclean* – fully automatic cleaning station
2 Manual cleaning station
3 Pallet elevating platform truck
4 Turning and rotating station
5 Loading drawer
6 Loading crane

Software: The soul of our process security ...

Intelligent and cross-process. We make software for the system.
Our applications will bring out the best from your hardware.

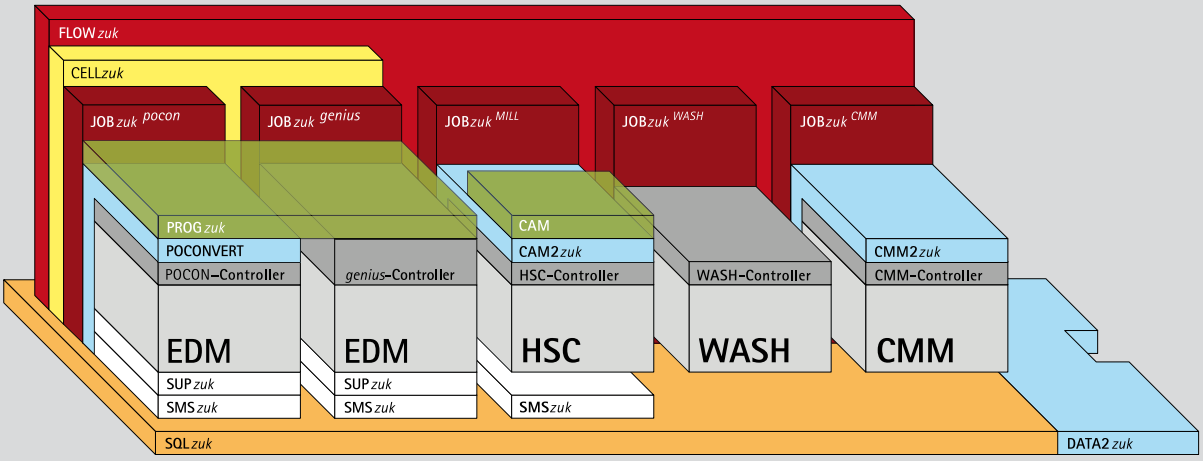
Whether single solutions, upgrades or complete process handling – software development is of the highest priority for us. Only the cooperation between powerful hardware and innovative software will lead to quality levels that our customers need today.



CELL*zuk*

Control of the whole manufacturing cell

- Eroding cell efficiency optimisation
- Automatic distribution of the jobs on the connected EDM
- Distribution of jobs on the remaining EDM in case of failures
- Full functionality of *genius* JOB*zuk* centrally available
- Breakdown at breakdown point
- Under size and depth correction
- Central status control of the individual machines
- Central parts availability check
- Highest flexibilty due to further possibility of working without the cell manager
- Consideration of machine-specific features is possible
- Automatic grouping of jobs according to special criteria
- A job list for all machines
- Graphical changer assignment
- Detailed machine conditions



JOB*zuk*

Optimises your machines

How can every single machine optimally contribute to your company's success? We asked ourselves this question and developed JOB*zuk*. With this program, you can arrange order processing according to your defined priorities, oriented to the machine in single-user operation. JOB*zuk* memorises all data of the current order in case of breakdown. For you, this means: you can register an order or a postprocessing at any time. We have developed JOB*zuk* in the following versions:

JOB*zuk* *genius*
Optimisation for all *genius* machines

JOB*zuk* *MILL*
Efficient milling

JOB*zuk* *CMM*
Systematic measurement

JOB*zuk* *WASH*
Automatic cleaning

FLOW*zuk*

Throughput optimisation

If several machines are working parallel and have to deliver perfect results working optimally in full capacity, planning skill is needed.

SQL*zuk*

One for all

SQL*zuk* is our database application for your multi-machine operation. In addition to SQL based database functionality, the application provides a central alarm system for the whole assembly.

SMS*zuk*

So that you know what is going on

SMS*zuk* continuously informs you about the status of your assembly. The program reports smooth workflow and status reports as well as possible disruptions.

Our software is compatible downwards as well as upwards. Our software solutions offer corresponding upgrades for partial or full automation.

SUP*zuk* – **support that will go down well**

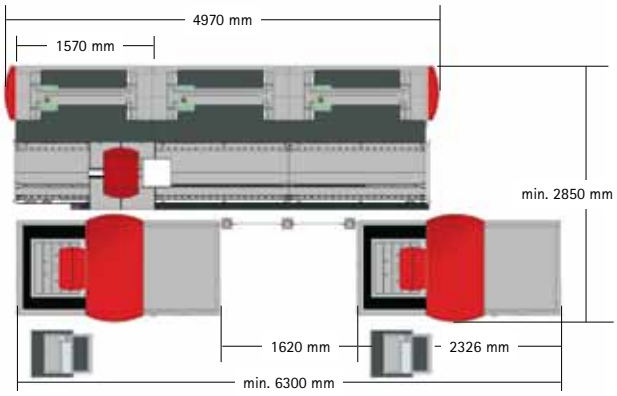
Maintenance and system support that arrives with SUP*zuk*.

PROG*zuk* – **external programming**

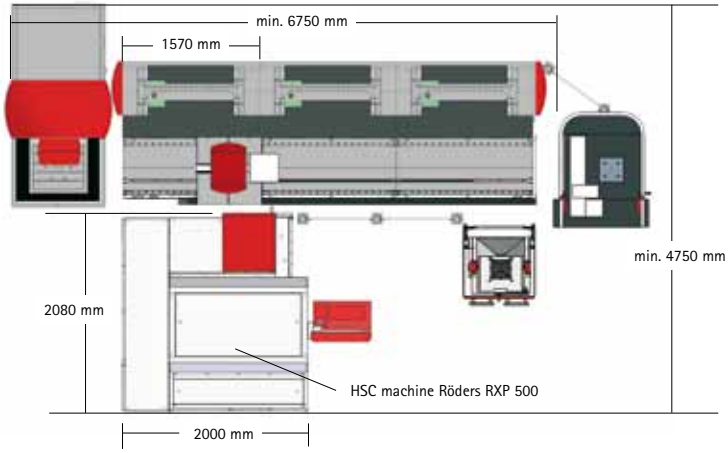
PROG*zuk* is the external programming place for our controls. From here, you can programm work procedures on your eroding machine.

Installation possibilities and space requirements

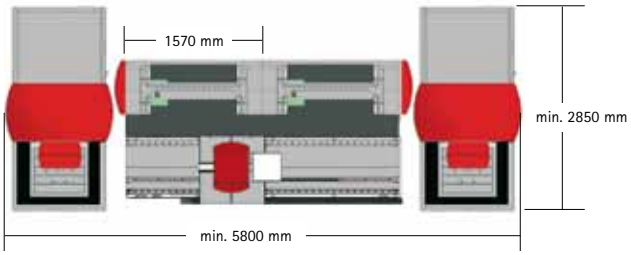
Alternative 01 (Minimum installation area 6300 mm x 2850 mm)



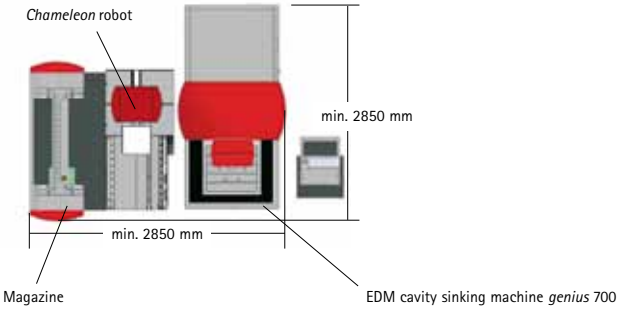
Alternative 02 (Minimum installation area 6750 mm x 4750 mm)



Alternative 03 (Minimum installation area 5800 mm x 2850 mm)



Alternative 04 (Minimum installation area 2850 mm x 2850 mm)

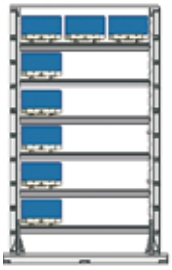


Place to draw your own requirements

Flexibility of the magazine (Examples)

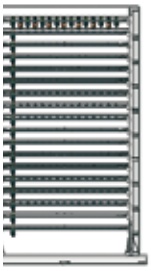
PowerChuck 45-fold

UPC 18-fold



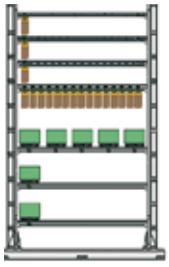
Electrode 135-fold

Compact Combi 270-fold

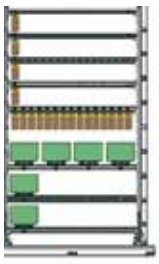


Electrode 75-fold
UPC 6-fold

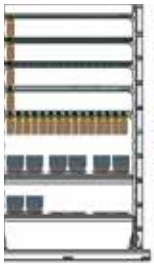
Electrode 60-fold
PowerChuck 15-fold



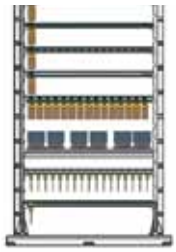
Electrode 75-fold
PowerChuck 12-fold



Electrode 75-fold
Power-Grip quadruple 6-fold



Electrode 75-fold
Power-Grip quadruple 3-fold
HSK40 34-fold



Electrode 45-fold
HSK40 17-fold
Power-Grip double 12-fold
Power-Grip quadruple 3-fold

Electrode 75-fold
Power-Grip double 12-fold

	Size (max.)	Transfer weight (inkl. pallet max.)	Weight per shelf (max.)
Electrode	250 x 250 x 100	20 kg	120 kg
Compact Combi	50 x 50 x 40	8 kg	120 kg
PowerChuck	300 x 200 x 100	40 kg	120 kg
UPC	320 x 320 x 200	125 kg	200 kg
Power-Grip double	158 x 318	60 kg	200 kg
Power-Grip quadruple	318 x 318	125 kg	200 kg

Magazine basic weight 550 kg.
Mounting for each magazine max. 1000 kg.
Chameleon robot with a magazine weight 1000 kg.
Max. Pallet size 500 x 500 mm or 400 x 600 mm with max. transfer weight 125 kg.

simply genius

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