

# PressKraft.

# Partner for your Global Competitiveness!











**PRESSKRAFT Engineering Automation LLP** is an Indian based engineering automation company formed by an organization whose members have over a two decades of experience and expertise in Industrial automation and application, technology and services.

### **Offers - Industrial Products.**

- Servo Press Units & Centering Device (Center Master)
- Hydro Pneumatic Products, (Hydro Pneumatic Press & Cylinders, Boosters (Air, Fluid & Gases).
- Riveting Machines, Roll forming & Bushing Machines.

### **Sheet Metal Solutions**

- Clinching, Punching, embossing & SPR.
- and Elements Installation (Nut & Stud Clinching).

# **Our Profile.**

# PressKraft

- Registered Office in Chennai & Pune, Sales agent in NCR.
- Office space of 2500 Sq. Ft in Chennai & Pune.
- Assembly & Testing facility @ (Tamilnadu) Trichy 6000 Sq. Ft shop area for sheet metal technology solutions and products assembly.
- Inhouse facility for Clinching, Nut Clinching, Riveting, etc. and trials and testing facility.
- Dedicated in-house design team & engineering facility.
- Quality Control and standards room, etc.
- Software: CAD / Solid Modelling /Software for Electrical circuits.





# **Our team and facilty:**





**Our Global Partners** 



Channel Partners for....















# **Friedrich Maschinen- und** Werkzeugbau GmbH

- History D. Friedrich tradition for nearly 70 years
- 1948: Foundation of D. Friedrich Maschinen- und Werkzeugbau GmbH
- 1950 to 1960: On the way to engineering
- 1966: Invention of the Radial Point Riveting technology and issue of patent
- 1984: Presentation of the first CNC riveting machine worldwide
- 1990: supplier of the automotive industry with more than 50 employees
- 2000: certification to DIN ISO 9001
- 2005: Turnkey special-purpose machines including riveting technology
- 2011: CNC riveting machines with handling robot and parts feeding
- 2014: Delivery of the first Servo-Roll-forming machine





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# Friedrich – Maschinen- und Werkzeugbau GmbH

Product Range

The company **Friedrich Maschinen- und Werkzeugbau GmbH** of Remshalden-Geradstetten has successfully conducted business in the fields of riveting technology and assembly automation.

**Roll Forming** 

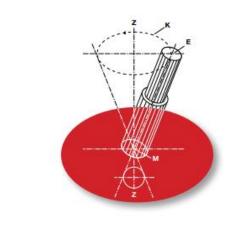
Products;

- **Riveting Machines -** Radial Point Riveting and Orbital Riveting.
- **Roll Forming -** Machines and Technology.
- Bushing Machines.

Radial Riveting







**Orbital Riveting** 

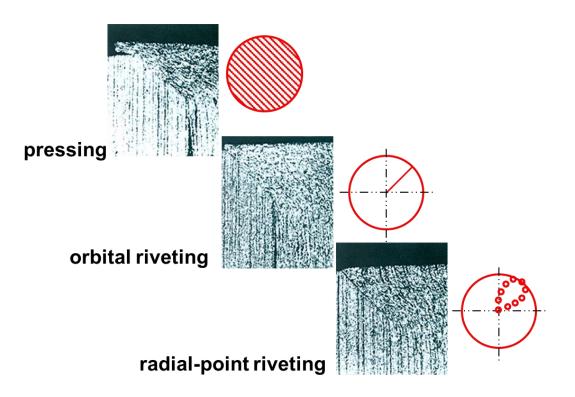
# Radial Point Riveting Advantages

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- developed and patended in 1966 by FMW.
- hypocycloide or radial-point riveting movement has enormous advantages compared to pressing or orbital riveting:
- lesser axial force required for high riveting power
- low heat developement and smooth closing head surface
- gentle change of the structural conditions
- no rotation of the riveting die → stamp marking is possible
- bearing stress is very good to determine.
- vertical position of riveting die is of advantage for automated die exchange and exact measurement systems

# Almost no change in structural condition

a trademark of the radial-point riveting technology



# **Friedrich –** Riveting Machines

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# **Column Type Riveting Machines.**

- Pneumatically operated
- Robust workmanship
- Universal use
- Machine table and pedestal made of grey cast iron



### **Pedestal Type Riveting Machines.**

- Modular compact design
- Ergonomically designed
- Pneumatically- / hydraulically-operated



# **Friedrich –** Riveting Machines

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### **Riveting Units.**

- Modular configuration
- Driving motor, adaptable to a number of installation variants
- Particularly suited for installation in special-purpose plants



### Safety Riveting Machines & Special Purpose Riveting Machines.

- Pneumatically operated
- Active accident prevention
- BG approved



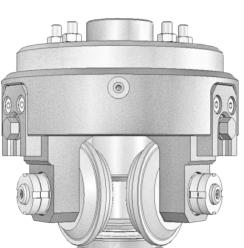
#### PRESSKRAFT Engineering Automation LLP · www.pkraft.in

# **Friedrich –** Roll Forming & Bushing Machines

# **Roll Forming Heads.**

- types and sizes of roll-forming heads and roll-forming units:
- 3 standard sizes exist:
- VR2xx with NE21X (hydraulic feed up to 12 kN, max. stroke 80 mm)
- VR5xx with NE51X (hydraulic feed up to 40kN, max. stroke 72 mm)
- VR2xx with Y321 (electrical feed up to 18 kN, max. stroke 500 mm)
- fields of application:
- roll-forming diameters: ø8 to ø120 mm
- materials suited for roll-forming:
- steel, stainless steel, aluminum,
- pressure die cast (Al, Zn or brass alloys)









## **Friedrich –** Niet Control – Process Monitoring

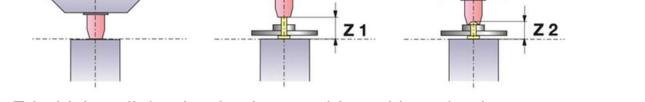
### **Friedrich - Nietcontrol**

the success formula:

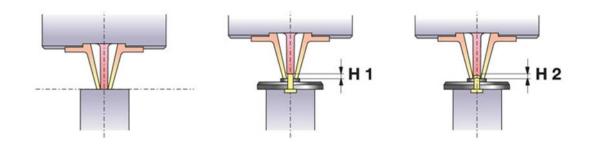
optimized quality assurance = maximum of operating safety with a minimum of operating efforts

- > patented in house developed integrated measurement and control systems
- > easy to use and upgradeable with many useful options

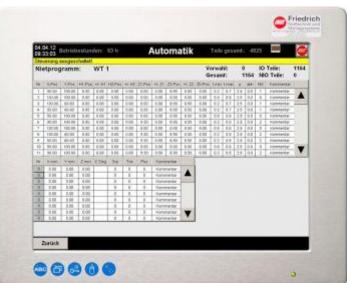
Friedrich radial point riveting machine with length measurement



Friedrich radial point riveting machine with projection measurement









### **C&M Robotics –** Expert in Press Fit Products

# C&M Robotics, a company specializing in automatic assembly and press-fitting systems.

- Center Master, which automatically corrects center position errors occurred when various precision components are assembled (inserted/press-fitted).
- FLEXPRESS® used in cases of precision component assembly and automatic insertion.
- Graphic Indicator IGI Plus which provides superior functionality in press-fitting quality management.





### **C&M Robotics –** Center Master

PRODUCTS

# Self-aligning and Correction Device

Center Master is an innovative device that dramatically improves the quality of assembly parts by compensating for (positional and/or angular) errors that occurs when assembling various precision parts.

### CENTER MASTER LINEUP





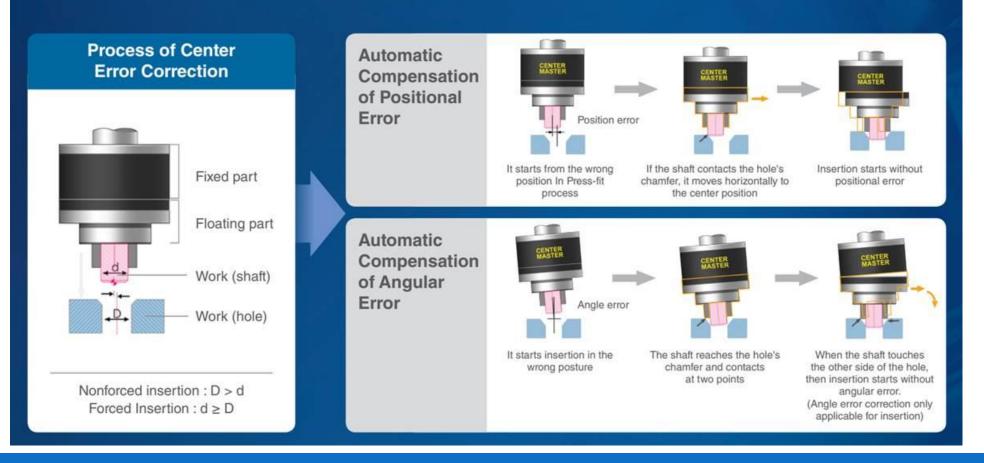




# **CENTER MASTER®** Self aligning and Correction Device

### Principal of correcting inaccurate position

Center Master compensates for positional and/or angular errors which are major causes of poor Press-fit



# C&M Robotics –

### Servo Press Unit – for Precise Pressing.



### FlexPress® EM·SEM Series



#### Features

- Standardization.
- Highly-precise press-fitting system
- User friendly intuitive interface

#### 1. Highly-precise press-fitting system

- Repeatability 0.01 mm
- Location set minimum unit 0.001 mm
- Force se < 0.5% of F.S

#### 2. Superior data analysis ability

- Support various functions which effectively manage press-fitting quality
- Support various searching methods
- Several work data indicated in graphs

#### 3. User friendly intuitive interface

- Convenient model set with the use of patterns
- Motion simulation for the selected model is supported

### **C&M Robotics –** Servo Press Unit – for Precise Pressing.

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### FlexPress® EM·SEM Series



#### Features

- 4. Real-time quality management
- have up to hundred data models
- Upto eight operation results can be checked simultaneously

#### 5. Various and wide range of models

- Nine models for maximum thrust power ranging from 0.2 ton to 20 ton
- Five stroke types ranging from 150 mm to 350 mm, 50 mm gap (150 mm - 400 mm for 20 ton)

#### 6. Controlling external devices

- utilize digital input/output contact module through using Modbus TCP
- Control of external devices (PLC and others) is possible through using fieldbus and Ethernet communication

# **C&M Robotics –**

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### Servo Press Unit – User Interface/Data Monitoring.



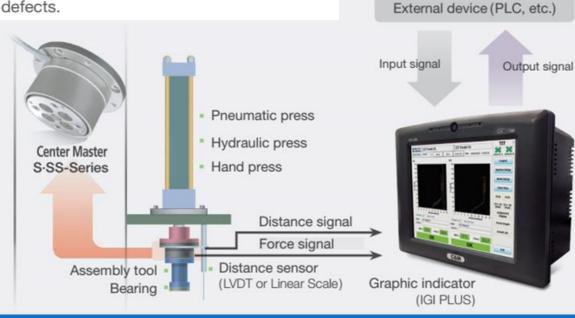
## **C&M Robotics –** Graphic Display Unit – Process Monitoring.

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**Intelligent Graphic Indicator** 

# Application

- In the process of parts assembly, IGI Plus monitors work data and judges pass or fail based on the judgment conditions.
- C&M's Center Master S/SS-Series (load cell built-in type) can replace general load cell to automatically correct the center position error between parts while measuring press force, thereby preventing assembly defects.



#### Intelligent multi-function

- Digital I/O : In 32, Out 32
- Embedded amplifier (1/16~4096)
- 4 ch. sensors (force/distance/time)
- 24 bit ADC resolution

IGI Plus™ igi plus TIT 2ST Model 01 I Plus v2.0 1 1ST Model 01 Time 2014/10/15 - 14:02:3 PC Const. Baglish v Reset Zoon Out Logout System Setup Work Setup Data View STIG ST2G ST1+26 ST1+26 (One) (Two) Judgemen Display Frend Graph **Result List** 

OK

C&M

Exit

# July® Industrial Limited

Servo Press Unit – Data Monitoring.

**July® Industrial Limited**, its predecessor called Changhua Machinery Factory, was founded in Taiwan in 1985, then moved to Dongguan in 2008. Now July® is a professional manufacturer of various hydro-pneumatic products, which has two factories

# **13** + **OF RICH EXPERIENCE**

The main products of the company are: Hydro-pneuamtic Cylinder, CNC Knife-fighting Cylinder, Air-driven Gas/Liquid Pump, Pneumatic Punch, Hydro-pneumatic Pressurization Equipment, or according to the needs of customers for the non-standard automatic customized pressure installation equipment!





# July® Industrial Limited Servo Press Unit – Data Monitoring.





**Eckold GmbH & Co. KG** Sheet Metal Connection.



**Eckold GmbH & Co. KG** Germany, (St. Andreasberg) founded in 1936

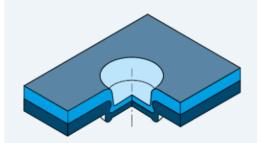


# Eckold GmbH & Co. KG Future ...for sheet metal and profiles

- Our future technology is clinching (press joining)
- Here we want to maintain and expand our position as technology leader.
- FROM ALUMINIUM TO STAINLESS STEEL CLINCHING JOINS THEM ALL

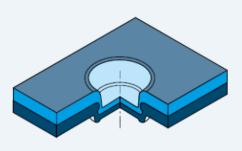


# **R-DF clinching**



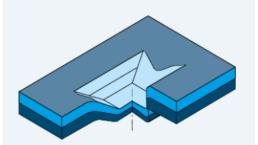
Clinching type R-DF, round clinching element

### **G-DF clinching**



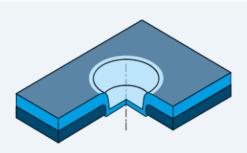
Clinching type G-DF, round clinching element

#### S-DF clinching



Clinching type S-DF, beam-shaped clinching element

#### **CONFIX clinching**

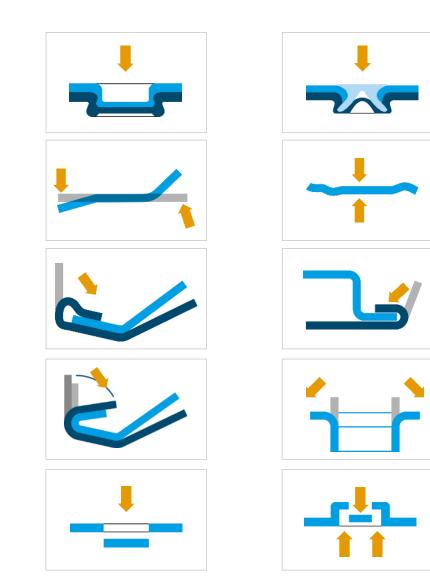


Clinching type CONFIX, round clinching element



# Eckold GmbH & Co. KG Core Techniques

- Clinching (press joining)
- Self piercing riveting units
- Forming
  - Shrinking and stretching
  - Burnishing
  - Straightening
  - Seamclosing
  - Flanging
  - Combined punching and embossing
- Punching





- Automobile manufacturers and suppliers
- Car body manufacturing
- Household appliances (white industry)
- Aircraft construction
- Air-conditioning and ventilation technique
- Small trade (tinsmith/plumber/roofer etc.)
- Shipbuilding (shipyards)



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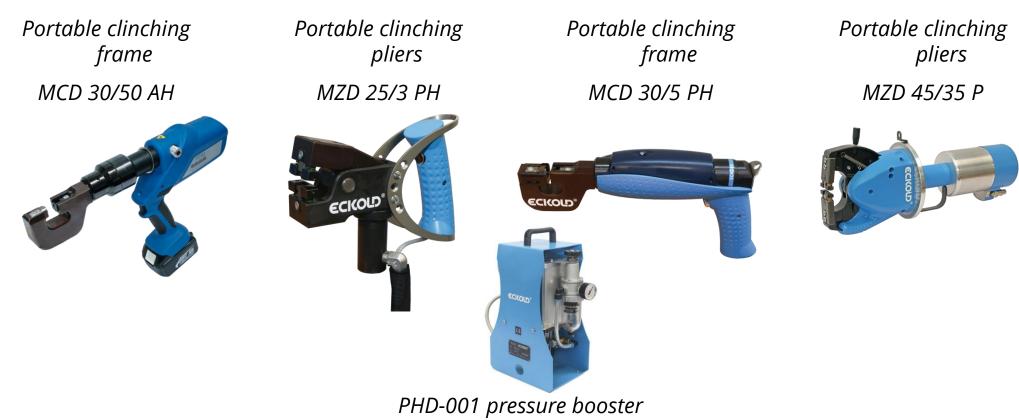


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# Product portfolio

The key to our success is our comprehensive product portfolio

• Portable, hand-held devices





# Product portfolio

The key to our success is our comprehensive product portfolio

• Stationary machines



Pressing tools



DFG 500/60



Multi-function machines MFG 500/150 E

# **Clinching technique**



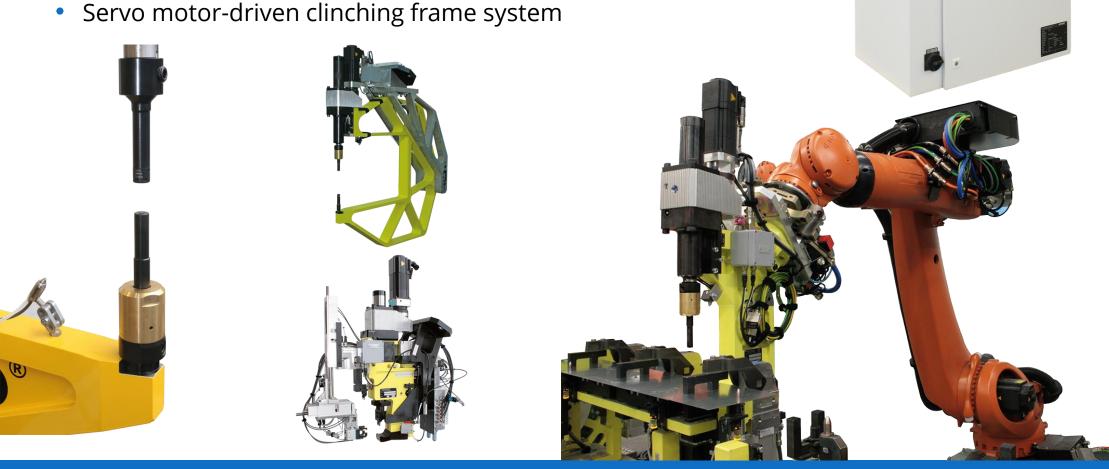
A

GIOXIDE

# Product portfolio

The key to our success is our comprehensive product portfolio

• Servo motor-driven clinching frame system





# Product portfolio

The key to our success is our comprehensive product portfolio

• Clinching fixtures and plants





# **Clinching technique**



# Example



### Automotive industries & suppliers

 Bonnet Servo motor-driven clinching system DFB-800 clinching frame DFB-801 clinching frame EM-011 control cabinet











# **Clinching – Non-Automotive**





### **Products –** Stationary machines





# Punching fixture for rear axle frame -

Automotive Industry

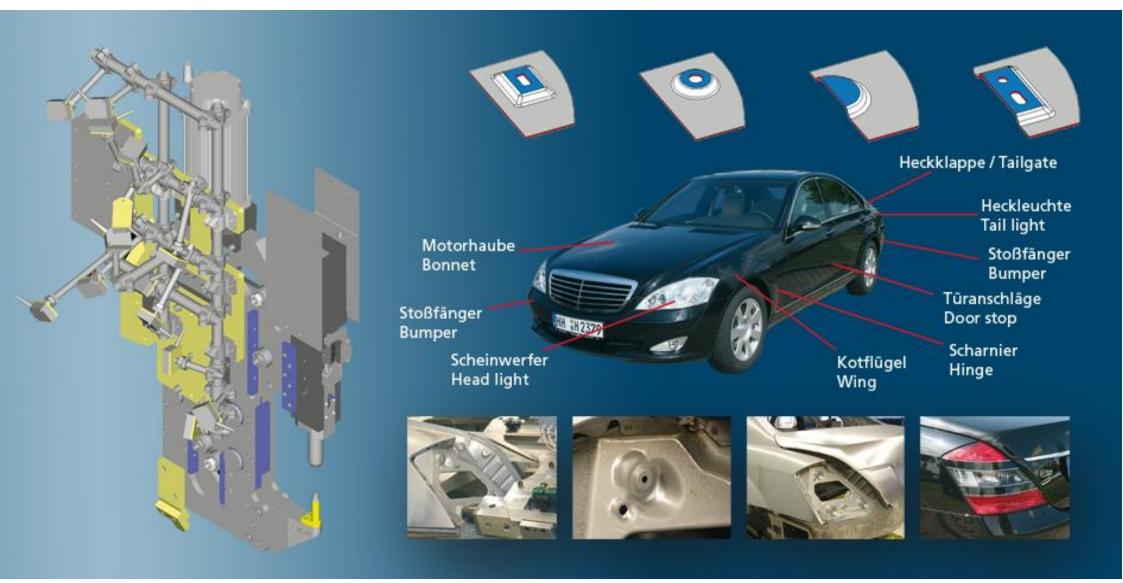




# **Embossing and punching frame –**

Automotive industry





# **Clinching in the white goods industry**

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#### **PROFIL – a Penn Engineering Company.**

# PressKraft



**PROFIL** manufactures support fasteners such as self-piercing rivet nuts and selfpiercing rivet studs as well as rivet fasteners and press-in fasteners that are attached to formed sheet metal parts.

Although there are many element types, our insertion process comes down to 4 basic elements:

- <u>Self-clinching</u> elements, which deform the component
- <u>Self-piercing</u> elements, which punch their own hole
- <u>Press-in</u> elements, which are inserted into an existing hole
- <u>Riveting</u> elements which clamp themselves into the pre-punched metal when being inserted

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#### **PROFIL – a Penn Engineering Company.**

# PressKraft



Self Pierce Rivet Studs Types: PFS, SBF, SBK, KSB



Rivet Nuts Types: RND, RSN, RSF, RSK, REN



Clinch Studs Type: EBF



Self Pierce Clinch Nuts Types: MHN, MHD, A9N

#### **PROFIL – a Penn Engineering Company.**

Through our long-standing cooperation with fastener suppliers and manufacturers, PressKraft is a complete partner in supplying the perfect system solution. Our expertise provides you with a one-stop source for processing your elements.

**PRESSKRAFT** provides expertise in pressing elements into a given part. In addition to standard versions, we can also manufacture customized press to suit your application. The best process and application for fastener insertion is defined by the element itself and its design.

Fully automatic placement

Robot-controlled placement

Manual insertion procedure







### Lutz Precision – Tipped for Excellence!



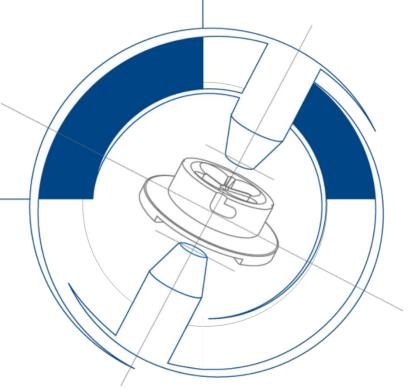
**LUTZ Precision** is one of the world's leading suppliers of tip dressers and cap changers for the automotive Industry.

#### Lutz Precision k.s.

Karloveská 63 841 04 Bratislava **Slovakia** 

Bratislava is the production center for Lutz Group worldwide. 100% manufacturing made in-house to meet all necessary specification about tolerances, quality and accuracy.

Allows Lutz to supply machines to most automotive OEM's, Tier 1 7 Tiers 2 companies.



Lutz Precision -Products - Tip Dresser, Stationary

#### Tip Dresser, Stationary – 10.36. Series and HS ALU Applications Series

field of operation: on robot welding gunstype:stand-alonesetup:single head product(including 1 milling tool)electrically driven

From the simple tip dresser with stand, motor, gearbox with integrated suction, milling unit, and control box, the machine can be upgraded by means of various additional parts.

These include, for example, Profinet and Interbus connections, a rotation query, etc.







### **Electrical Swing Arm Tip Dresser - E2C**

field of operation: on pedestal welding guns

dump-in / swivel system type:

single head product setup: (including 1 milling tool)

electrically driven drive:



3)



43





### Lutz Precision -Products – Electrode Management Center.

#### **Electrode Management Center – series 10.67 and 10.68**

field of operation: on robot welding guns
type: Standalone combi system (for automated
electrode tip dressing and tip changing).
setup: dual head product (including 1 milling tool
+ 1 cap changing head)
drive: electrically driven
Advantage: 2-IN-1, which means two processes
(tip dressing and tip changing) - in - 1 unit (BKS
5810)

The advantages are obvious: automated welding of up to 100,000 welding

points without manual intervention lowest cycle times of the change process, thus no standstill high process reliability through permanent monitoring of all work steps



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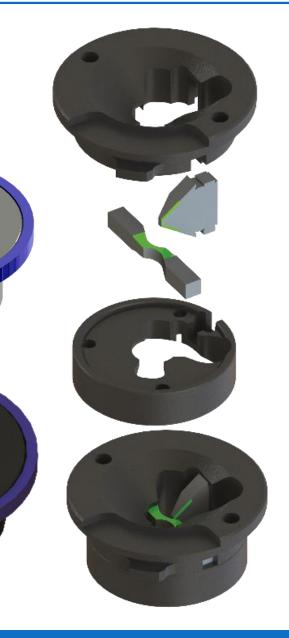
Lutz Precision -Products – Cutter.

#### Milling Tools and More – Series 3

we have worldwide experience in the field of electrode cap materials and the matching milling tools. We currently have a portfolio of 2,865 different combinations of milling tools in our product range, and that number is steadily increasing.

Our Milling tools.

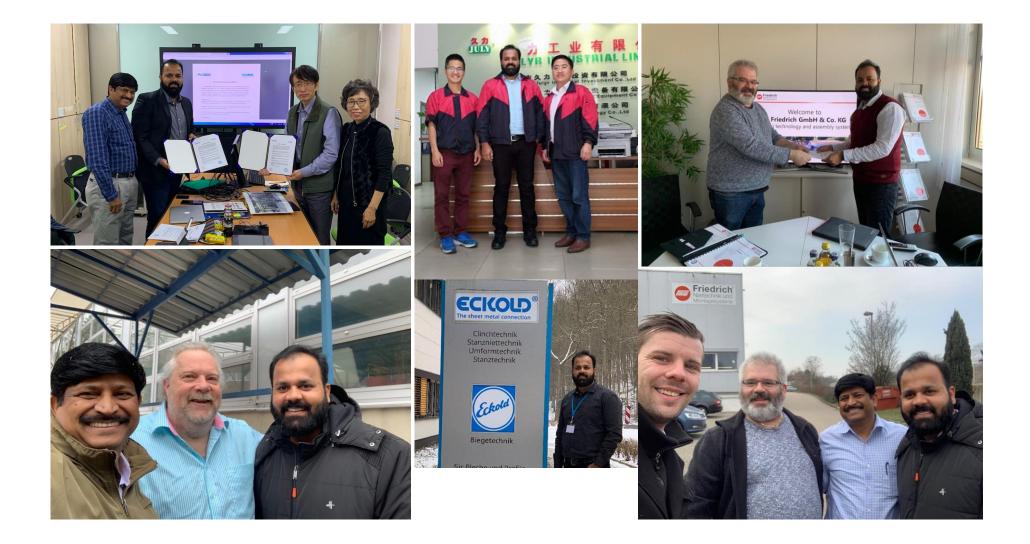
Single Blade Cutter Single Blade Cutter with Chip Breaker. Two Blade Cutter. Milling Systems for Aluminium Welding





#### **Meeting with Partners.**





#### **Our Esteemed Customers.**









































### Thankyou.



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