## Eckold Seamclosing Technique





for sheet metal and profiles

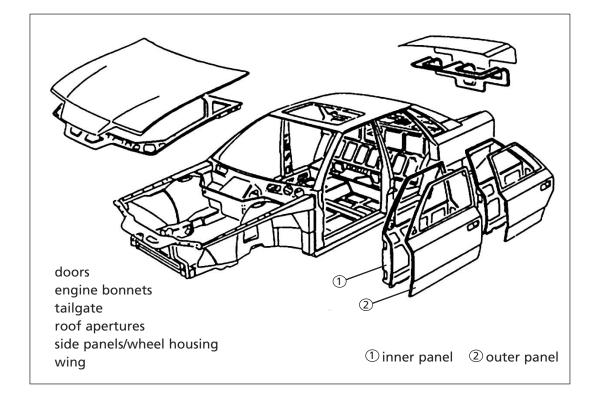
# Seamclosing on car components

### Eckold Seamclosing Technique: Top quality for form-fit joining of mounted parts.

Seamclosing is a proven, mechanical joining method used to join chassis parts, etc. with one another in a form-fit fashion. This technique is employed in the automotive industry, e.g. for fabrica-

tion of externally mounted parts. Here, the Eckold seamclosing technique offers a rational, economical and space-saving alternative to press tools and fully automated seamclosing stations.

# Fields of application



### **Target group**

Lines of business: Automobile manufacturer

Purveyor for automobile industry

Sheet fabricating industry

Fields of application: Prototype production

Spare parts production

Small- and medium-lot production

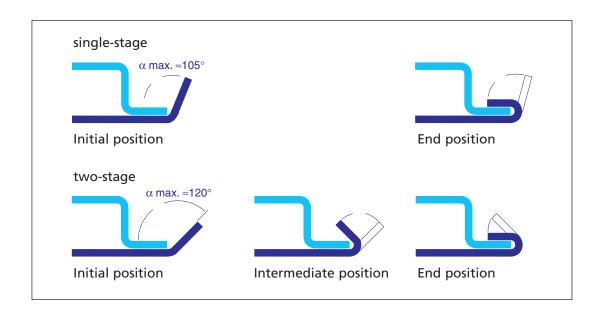
### Method

The Eckold seamclosing technique is a method in which a hydraulically driven seamclosing device is guided manually into a specific fixture.

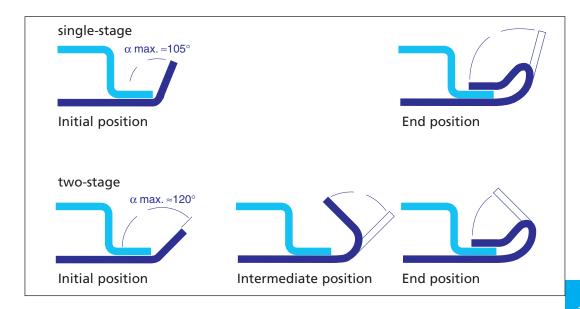


### The principle

# Seamclosing / flat seam



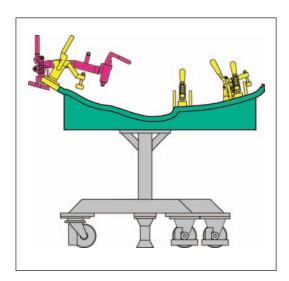
# Seamclosing / rope seam



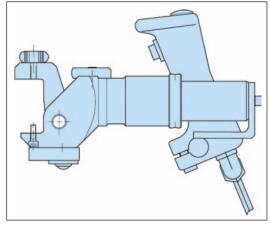
Components, belonging to a complete seamclosing station



**Seamclosing fixture** 



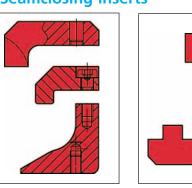
**Portable seamclosing pliers** 



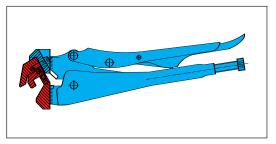
Hydraulic drive unit



## **Seamclosing inserts**

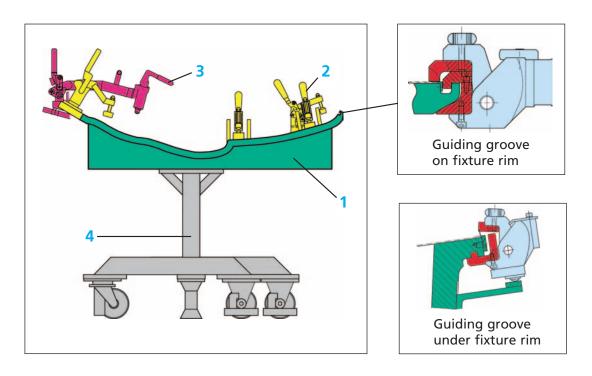


**Grip pliers with seamclosing insert** 



# Seamclosing fixture Construction and components





### 1 Seamclosing guiding frame

Component-specific, cast frame. Equipped with a milled contour support in the machining region and guiding groove for seamclosing pliers.

### 2 Clamping units

Clamping of the components to be machined in the seamclosing guiding frame.

Options: Rigid clamps

Swivel clamp

Clamping parts: Rubber

Plastic Steel

### 3 Centering units

For alignment of the parts to be machined with one another and/or to the seamclosing guiding frame.

Options: Rigid centering units

Swivel centering units

### 4 Basic frame

Options: Base design

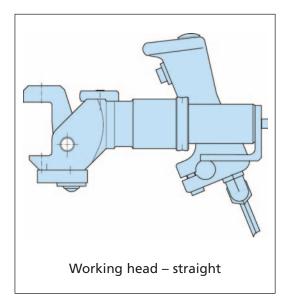
Frame design Table design

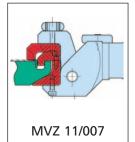
(optional with base plates or rollers)

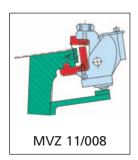
### Portable seamclosing pliers

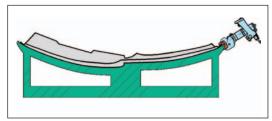
Depending on the seamclosing task at hand and the position of the pliers guiding groove on the seamclosing guiding frame, different types of pliers are available for optimal handling.

### **MVZ 11**

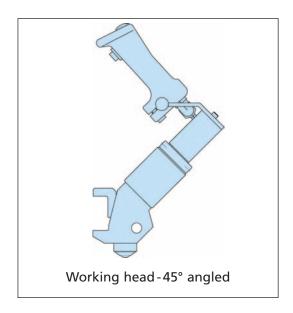


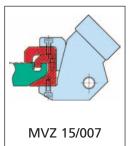


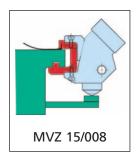


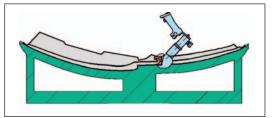


**MVZ 15** 

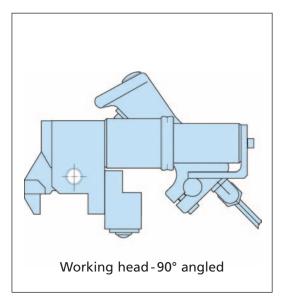


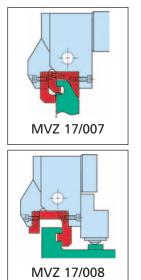


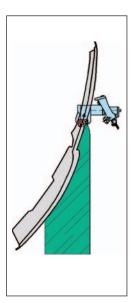




**MVZ 17** 





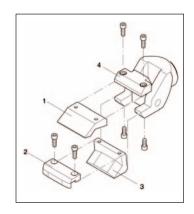


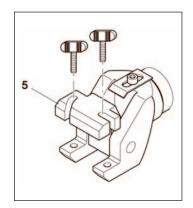
# **Seamclosing** inserts

We design and fabricate specific seamclosing inserts, based on the seamclosing task at hand and on the design and position of the pliers guiding groove.

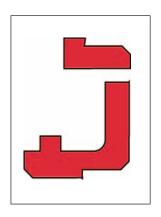
Seamclosing insert, guiding groove top, consisting of 3 parts

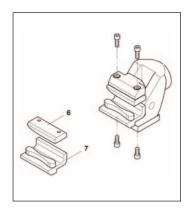






Seamclosing insert, guiding groove bottom, consisting of 2 parts

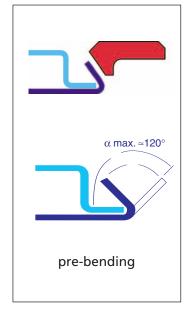


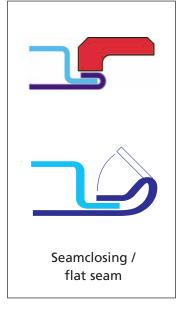


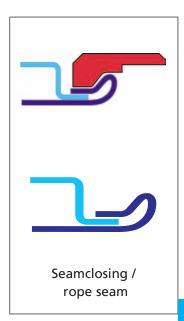
- 1 seamclosing jaw
- 2 guiding jaw
- 3 bottom jaw
- 4 pressure jaw with screw holes
- 5 pressure jaw for quick-change
- 6 upper jaw
- 7 bottom jaw

# Seamclosing jobs

Whereas the bottom jaw and/or the guiding jaw and bottom jaw depend on the shape and position of the guiding groove, the seamclosing jaw and/or the top jaw must be designed in accordance with the defined seamclosing task. This means that the top jaw, or seamclosing jaw, is designed with respect to pre-bending or seamclosing.







# Hydraulic drive units

Eckold hydraulic units are available for driving portable pliers of design series MVZ 11, 15 and 17.







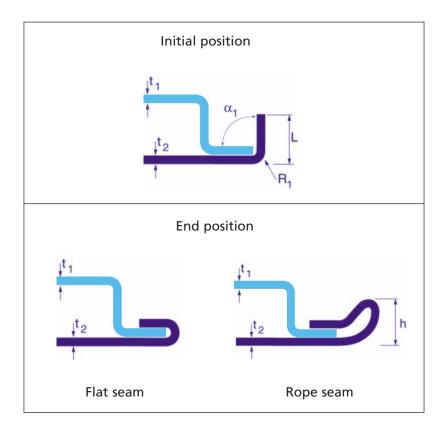
# **Auxiliary equipment**

Often it is not possible to work with portable seamclosing pliers in corners, with skips in the contour, or at the beginning/end of the seam. Caulking tools and grip pliers with special seamclosing inserts are frequently the best remedy for work in these areas.



#### **Parameter**

In addition to the specified component contour and seamclosing areas, the following parameters are also relevant for evaluation of the seamclosing task at hand.



- t<sub>1</sub> sheet thickness, inner panel
- t<sub>2</sub> sheet thickness, outer panel
- L Flange length
- R<sub>1</sub> Folding radius
- a<sub>1</sub> Folding angle
- h Rope seam height material

# Efficiency and advantages

Eckold seamclosing technique for prototype production, pre-production, small-lot production and spare parts production

- economical
  - low investment costs
  - minimal space requirements
  - short set-up times
  - low power consumption
- flexible
  - compatible standard components
  - can be installed anywhere
- unique
  - optimal quality
  - easy to use
  - versatile for a number of uses

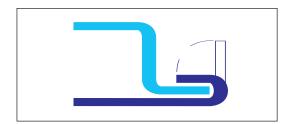
### **Services**

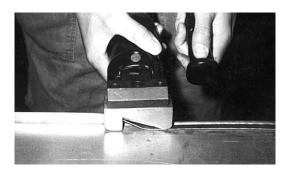
As a partner of the automotive industry we offer you:

- competent advice
- design and fabrication
- on-site service
- after-sales service

# Optimum production possibilities

### Seamclosing without fixture





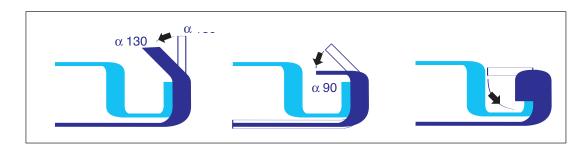


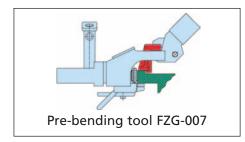


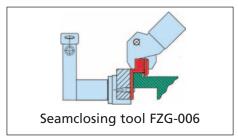
Example: fire-proof door

# Special applications

Seamclosing in fixtures, shown here for a section of an automobile sun roof



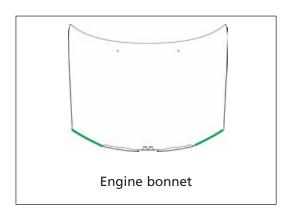




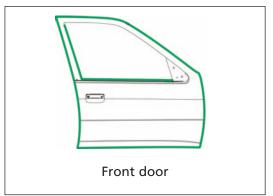


Example: sun roof

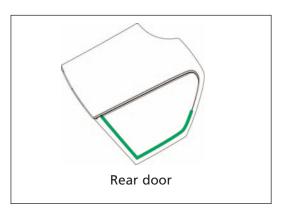
# **Examples for application**



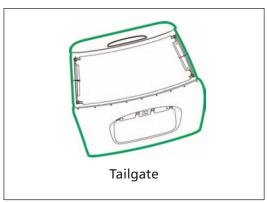


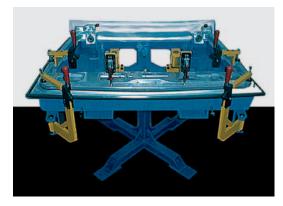


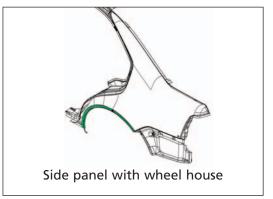














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