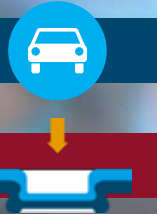


User report

Automotive industries



Clinching

| | |
|--------------|-----------------|
| Designation | Clinching frame |
| Type | DFB-845 |
| Ident no. | 00000088197 |
| Manufactured | 06/2012 |
| Order no. | 584910 |
| Number | 2 pieces |
| Other | |

DFB-845



Task:

Joining of various component parts in the rear car body (floor). The special characteristic is that the numerous joining points are also partly located deep in the rear body so that they can only be accessed with difficulty. This requires a high throat of the clinching frame which in turn implicates high weights for conventional clinching frames and the need for robots with suitable load capacities.

Solution:

A clinching frame perfectly suited for this purpose is the DFB 845. It is a lightweight frame which maintains the joining properties thanks to its exceptional design and shape and which can yet be handled with conventional robots due to its low weight. The honeycomb-like design allows for a high throat and compensates the lateral offset which must be expected due to spring resilience. The milled pockets reduce the weight of the clinching frame significantly and allow for the use of robots with conventional load capacities. This is especially relevant for the costs.

Customer rating:

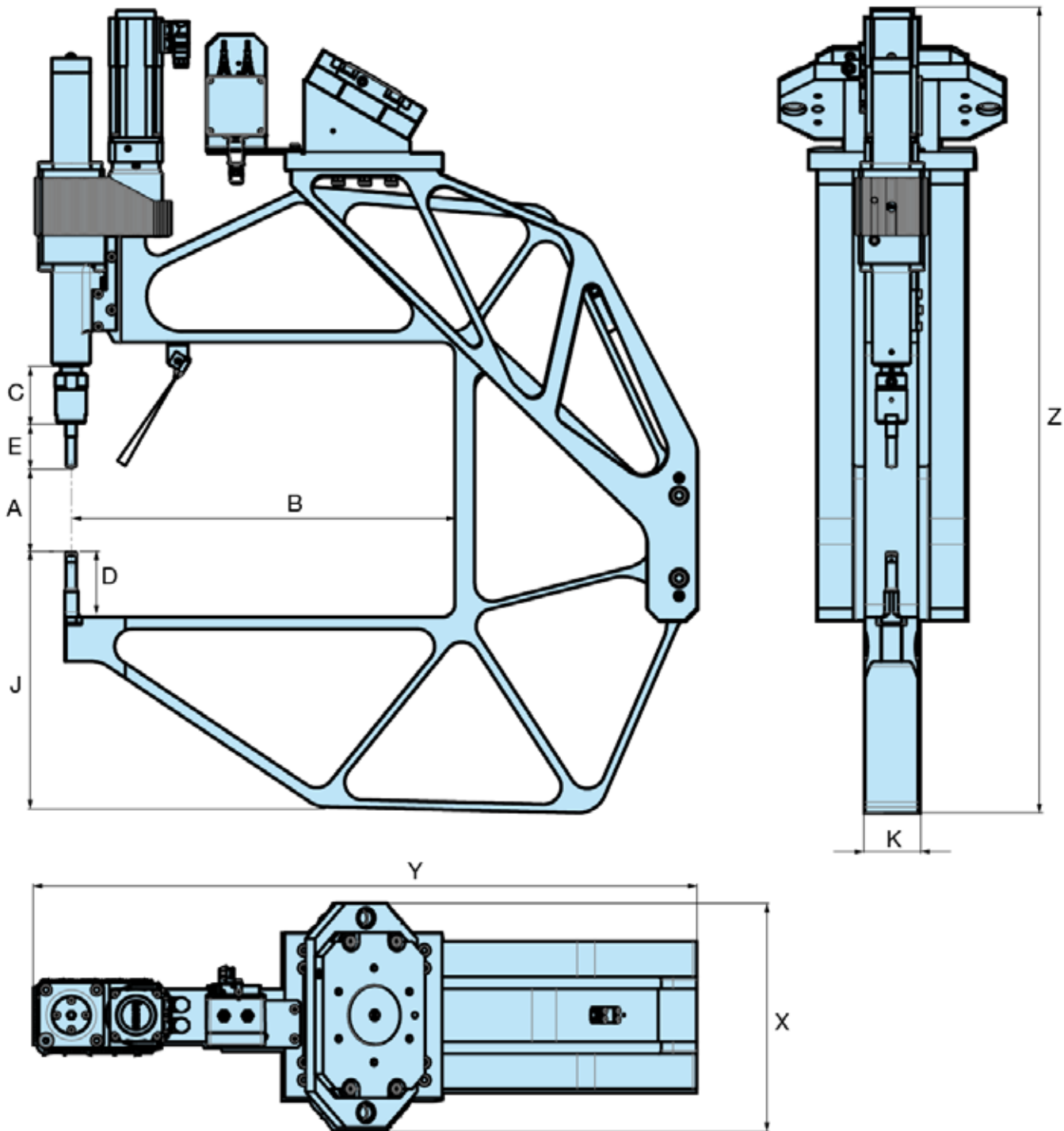
- always on-time deliveries
- unproblematic launch and use
- easy handling of user interface
- structured software
- good training material and structured qualification
- positively rated supplier

DFB-845



| | |
|--------------------|-----------------------|
| Name | Clinching frame |
| Type | DFB-845 |
| Ident no. | 0000087197 |
| Drive | servo motor-driven |
| Pressure force | max. 80 kN |
| Stroke length | 100 mm |
| Pneumatic pressure | min. / max. 5 / 6 bar |
| Weight | 210 kg |

| | | | |
|-------------------------------------|-----|------|------|
| Opening width | [A] | [mm] | 145 |
| Throat depth, horizontal | [B] | [mm] | 651 |
| | [C] | [mm] | 102 |
| Tool holder protrusion at frame end | [D] | [mm] | 109 |
| Tool holder protrusion, ram side | [E] | [mm] | 74,5 |
| Frame end height | [J] | [mm] | 441 |
| C-frame width | [K] | [mm] | 90 |
| Width | [X] | [mm] | 380 |
| Length | [Y] | [mm] | 1121 |
| Height | [Z] | [mm] | 1360 |



| | | |
|----------------------------|-------|-----------|
| Joining task | | 1 |
| Clinching variant | | R-DF 8 |
| Component | t_1 | various |
| Material | t_1 | Al |
| Punch side layer thickness | t_1 | 1,2 mm |
| Intermediate layer | | Glue |
| Component | t_2 | various |
| Material | t_2 | Steel |
| Die side layer thickness | t_2 | 0,8 mm |
| No. of clinching points | | not known |

Remark:

The micro spray system is used for all aluminium joints.

The micro spray system is required for the clinching of dry or washed Al joints in order to prevent contact alloying between the Al part and the punch.

When clinching oiled sheets, the oil layer acts as a separating agent. One would therefore assume that there is no need for a spray system. As there is however often no guarantee that the entire surface of the oiled sheet is covered in an oil film, we recommend using a micro spray system.



Servo motor-driven clinching system:

Overview and Setup:

- 1 **Clinching frame** for robot integration with servo motor drive and clinching tools (punch and die)
- 2 **Micro spray system** (optional accessory)
- 3 **Control cabinet** with servo regulator for drive unit and integrated process monitoring system, Visualisation software
- 4 **Cable set** for connection between control cabinet and clinching frame (in stationary design) and between control cabinet and robot base (when handling by robot)

Optional accessories:

- Micro spray system
- Floating mounting at clinching frame

(The illustrated components serve only as example and may differ in design and dimension.)



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Since our company was established in 1936 by Walter Eckold, the only aspect of our business not to change from that year to this has been our commitment to our customers. Our priority remains to provide our customers with economical and environmentally viable cutting edge technological solutions to their ever changing manufacturing processes.

During our 80 years of trading we have amassed a knowledgeable highly skilled engineering workforce in our specialist areas of shaping and joining sheet metal. These specialist skills enable us to quote from one off standard pieces of equipment to fully tailor-made automated robotic systems. A full range of all our specialist techniques can be found in all sheet metal, craft and industry work-places. Join with us, the successful sheet metal experts, to shape your future metalworking solutions.

Service von A-Z

- Tests and analyses for our customers
- Creation of sample sheets/components
- Preparation of feasibility studies for the design of moulds
- Concept development and constructive realisation of the technical solution
- Production in our own factory
- Commissioning at the customer's premises
- Carrying out regular maintenance
- Support with optimisations in the customer's process
 - Support with the robot position teaching process
 - Creation of micrographs / evaluation of clinching point quality
 - Online support

Start-up support after commissioning up to SOP

Training of system operators/maintenance staff/experts

Data and facts

- Founded in 1936
- Products in use in over 100 countries
- Over 25 sales partners worldwide
- Sales companies in Great Britain, Hungary, USA
- Certified according to ISO 9001:2015
- Certified according to ISO 14001:2015



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