User report

Windows, doors, facades

Clinching

Designation	Portable clinching frame
Type	DFB-1385
Ident no.	00000099687
Serial no.	900024232
Manufactured	10/2022
Order	594990
Number	1 Stück
Other	

Task:

The previous production of frames for facade engineering had to be improved. The manufacturing process was labour-intensive and time-consuming. Furthermore it seemed to be relatively expensive as blind rivets with auxiliary joining parts were used. Hole drilling, chip removing, rivet inserting and riveting – all of these steps had to be done previously.

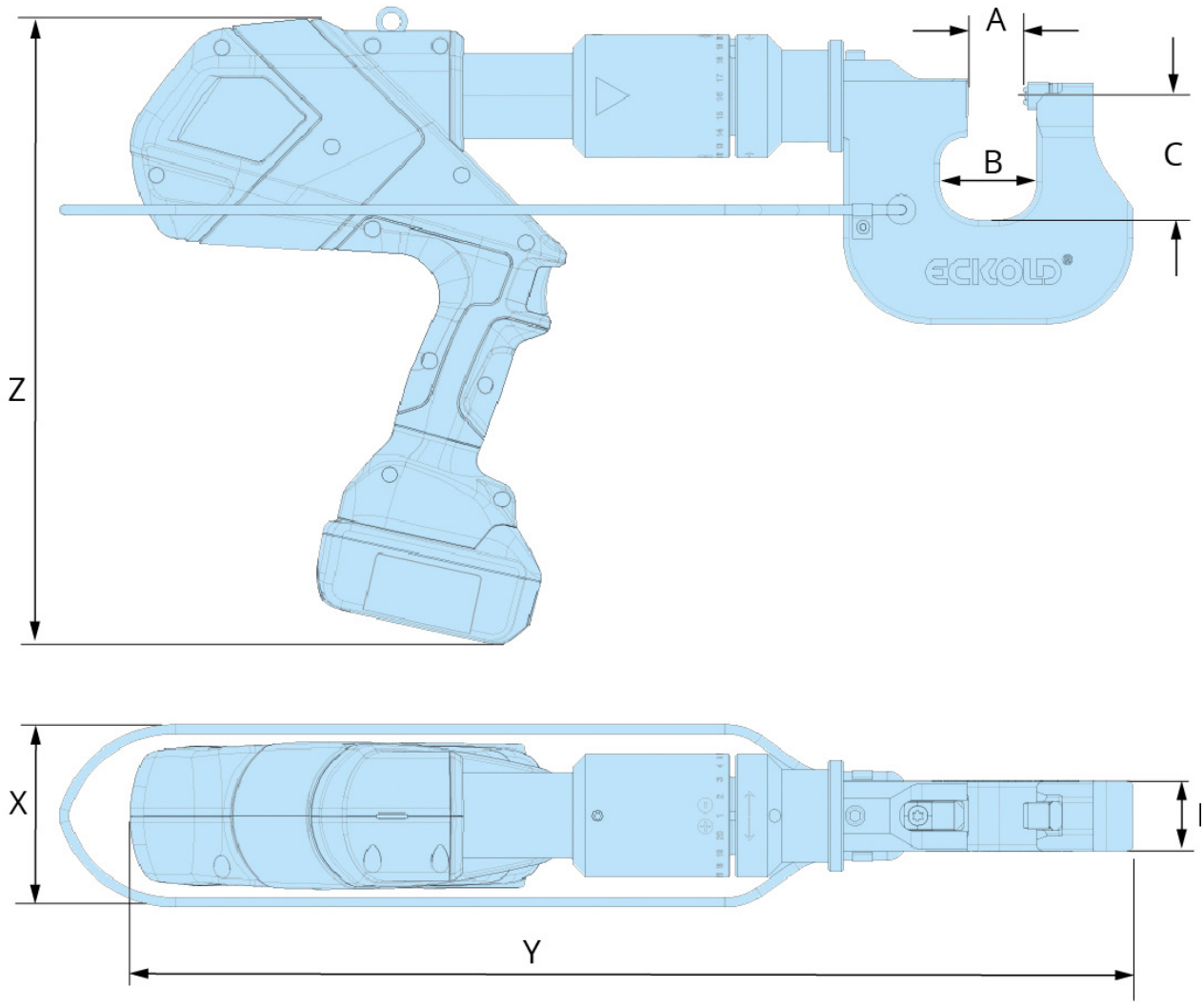
Solution:

The solution is a portable clinching frame. This battery-powered, mobile device is easy to handle, cheap and allows for flexible operations. The working steps drilling and chip removing as well as the costs for the blind rivets can be dropped. Just position the clinching frame and make a joint. The suspension relieves the operator so that hundreds of thousands of clinching points can be made with a single tool set.

DFB-1385

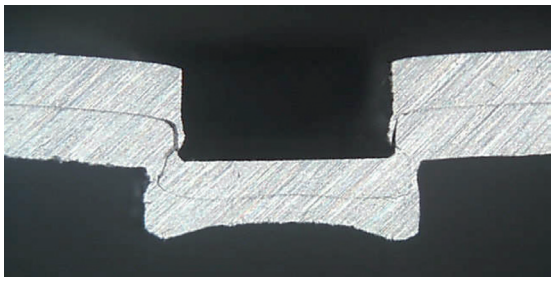
Name	Portable clinching frame
Type	DFB-1385
Ident no.	00000099687
Drive	Electric
Pressure force	10 to max. 50 kN
Working stroke	Path dependent, adjustable
Cycles	Up to 300 at 50 kN
	Approx. 400 at less kN
Weight	Approx. 9.3 kg | 14 kg with carrier case

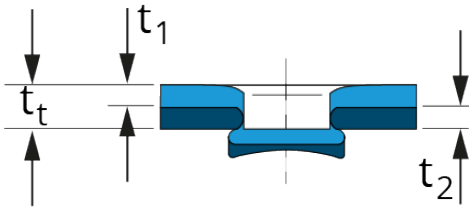
Opening width	[A]	[mm]	29
Throat, horizontal	[B]	[mm]	43
Throat, vertical	[C]	[mm]	64
Width in working area	[D]	[mm]	36
Width	[X]	[mm]	90
Length	[Y]	[mm]	558
Height	[Z]	[mm]	331

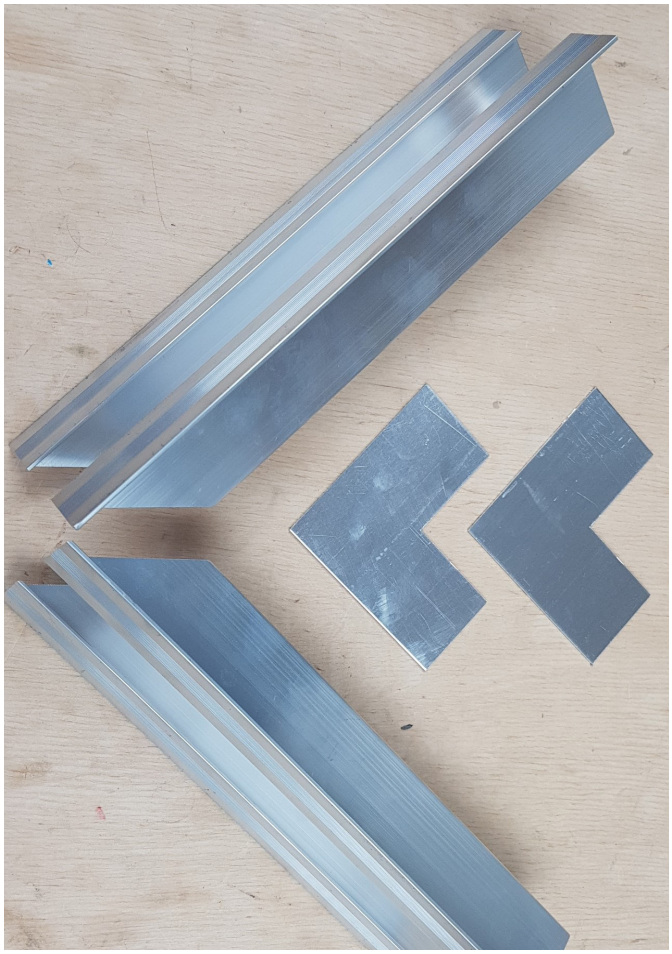


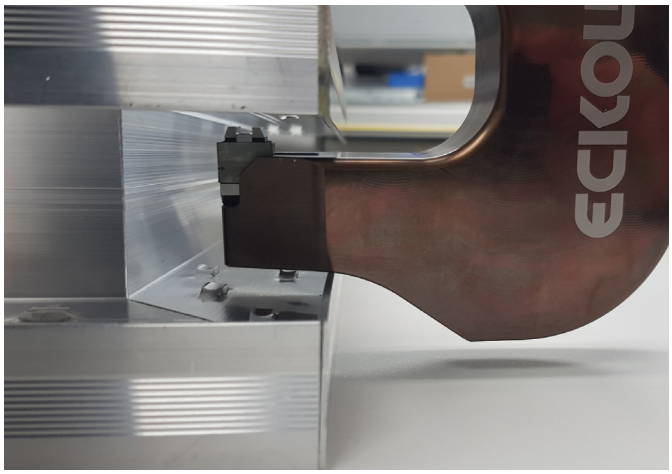
The scope of delievery includes a charger, the necessary tools for a quick tool change and a carrier case.

Joining task		1
Clinching type		S-DF 4
Component	t_1	Angle
Material	t_1	Al
Punch-side layer thickness	t_1	2.00 mm
Intermediate layer		-
Component	t_2	Profile frame (top hat section)
Material	t_2	Al
Die-side layer thickness	t_2	1.60 mm
No. of clinching points		4 / corner







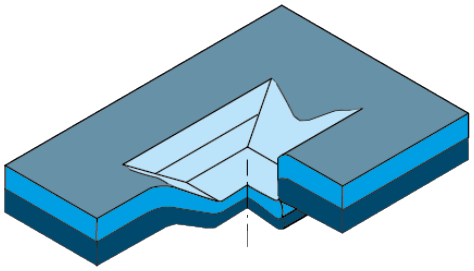


Advantages of the clinching technique instead of blind riveting:

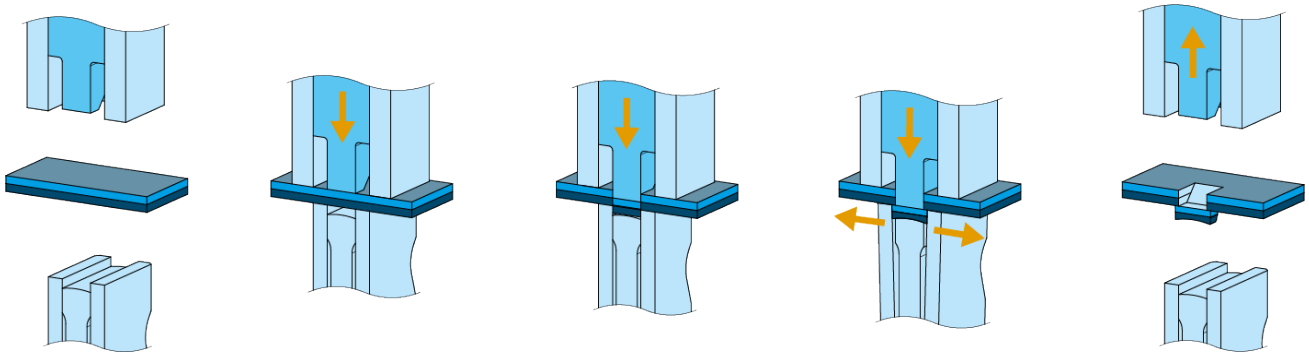
The main advantage of clinching lies in the fact that a positive, form-fitting joint is formed directly from the sheet metal material. The technique is also suitable for the joining of workpieces made from different materials and with different thicknesses.

Characteristics and advantages are, inter alia:

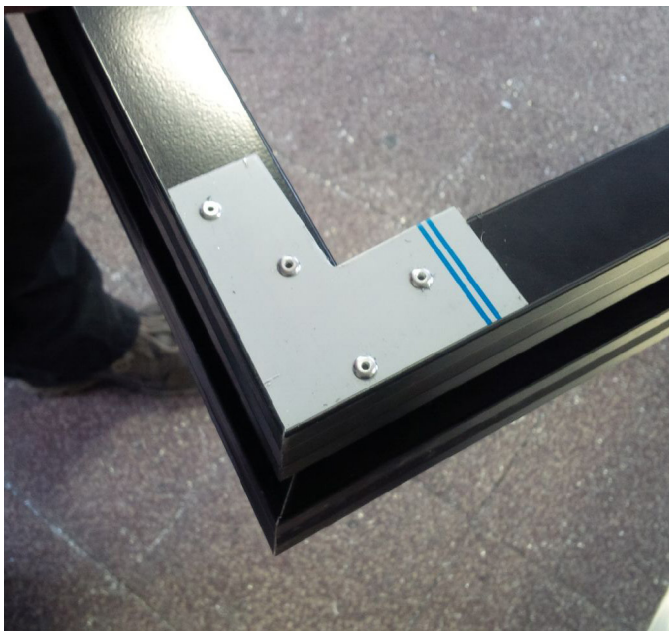
- Various sheet thickness combinations can be machined with a single tool set
- No need to prepare workpiece surfaces
- The working steps drilling and chip removing can be dropped
- No need for preparation or reworking of joining points/elements (prepunching, deburring, grinding)
- Change of process conditions is not a problem
- Low energy consumption
- Low capital expenditure and running costs
- No costs for auxiliary joining parts such as blind rivets

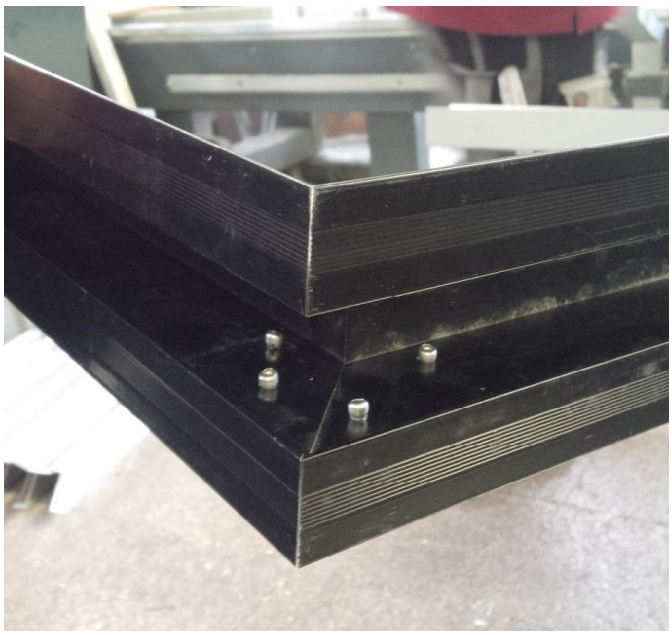


S-DF clinching element in perspective view



Steps with standard clinching option S-DF





Previous production with blind rivets

ECKOLD technics GmbH & Co. KG

Trading successful for over 85 years

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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