User report

Windows, doors, gates

Clinching

Designation	Clinching frame with hydraulic drive unit
Type	DFB-1234 / HA 510 DW
Ident no.	00000098860 / 00000098887
Serial no.	900019300 / 900019301
Manufactured	03/2019
Order	592294
Number	1 piece
Other	

Component group	Casing
Component	Shutters and blinds
Handling	Manual workstation, stationary

Task:

The previously used clinching technique had to be optimised regarding the mobile machine and the add-on parts such as roll feeding. Components with many variants as well as miscellaneous coatings and material thicknesses were other reasons to opt for a change. Last but not least the ergonomic environment of the worker had to be improved.

Solution:

A stationary clinching frame, driven by a standardised ECKOLD hydraulic drive unit. The customer set up an ergonomic and attractive workstation for various workpieces, combining the clinching frame, roll feeding and other mounting parts.

...see also page 3

DFB-1234 / HA 510 DW

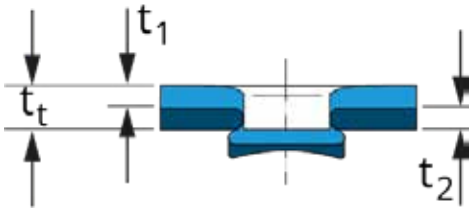
Customer rating:

- Optimal tool design
- Good consulting
- Clear and compact design of the system
- Easy handling and maintenance

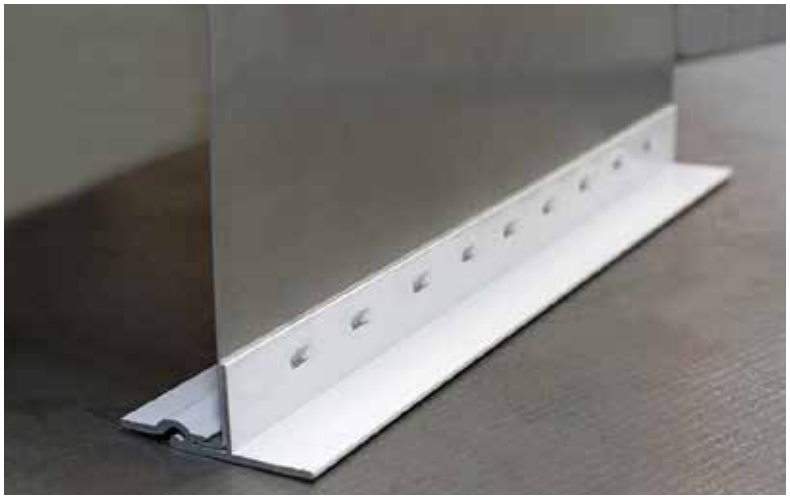
Name	Clinching frame
Type	DFB-1234
Ident no.	00000098860
Drive	hydraulic
Pressure force	max. 150 kN at 500 bar
Stroke length	6 mm
Throat, horizontal	200 mm
Throat, vertical	80 - 110 mm
Weight	approx. 145 kg

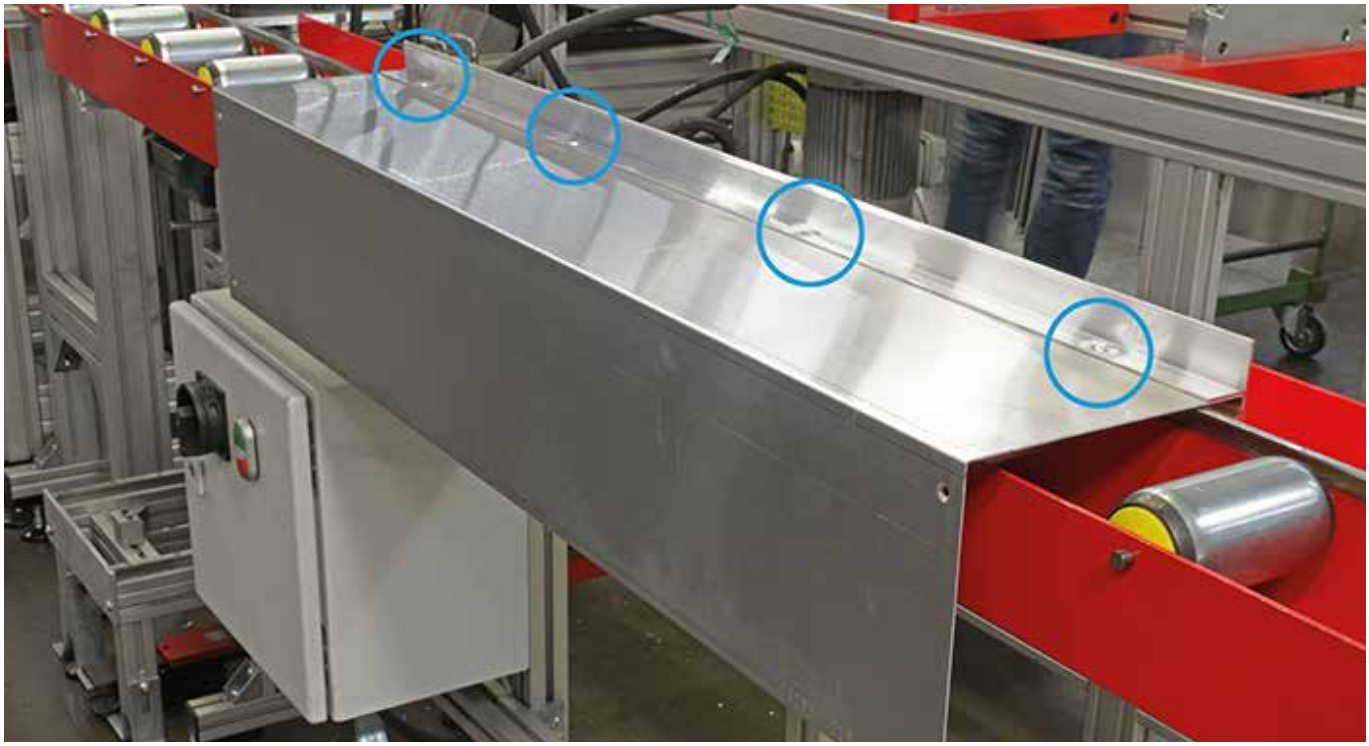
Name	Hydraulic drive unit
Type	HA 510 DW
Ident no.	00000098887
Operating pressure, flow	30 - 500 bar, adjustable
Operating pressure, return	150 bar, non-adjustable
Max. pressure	530 bar
Oil pump	2.6 l/min.
Connection system load	Pioneer screw coupling
Power supply	380 - 420 V / 3 Ph / 50 Hz
Power rating	3.1 kW
Rated current	7.1 A
Weight	approx. 142 kg

Joining task		1	2
Clinching type		S-DF 4	S-DF 4
Component	t_1		
Material	t_1	Al	Al
Punch-side layer thickness	t_1	1.60 mm	1.50 mm
Intermediate layer		none	none
Component	t_2		
Material	t_2	Al	Al
Die-side layer thickness	t_2	1.00 mm	1.90 mm
No. of clinching points		1/stroke	1/stroke



Shutter box





Manufacturing unit for shutter box

The manually operated unit is able to produce shutters of various dimensions. The stroke release is activated by foot switch.

Customised features for an optimised serial production

Manual workstation in consideration of ergonomical requirements and safety aspects.

Equipment:

1 Hydraulic drive
2 Clinching frame
3 Release by foot switch
4 Roller tracks, provided by the customer

Solution:

The solution is a stationary clinching frame, driven by a standardised ECKOLD hydraulic drive unit. The customer set up an ergonomic and attractive workplace for various workpieces, combining the clinching frame, roll feeding and other mounting parts.

Our technical test field considered all joining parameters such as various layer thicknesses and their surface conditions (uncoated or powder-coated) and optimised the range of clinching tools. As a result, considerably fewer miscellaneous clinching tools are necessary to assure the tolerance range for good joints and joining forces.

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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