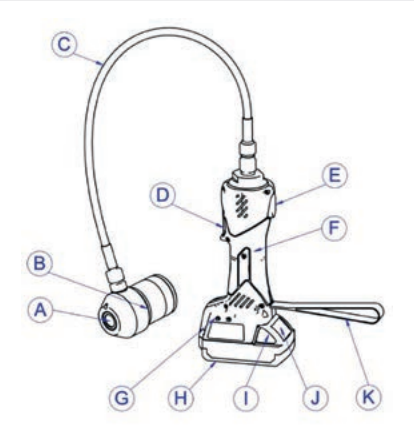
DESCRIPTION

The **Akku-Compact Flex® Punch Driver** is a handheld battery-powered electro-hydraulic device for making holes of different shapes in soft to medium-strength steel, stainless steel and aluminium sheets. ALFRA punch drivers require little maintenance thanks to the closed hydraulic circuit and enable you to work in any position.

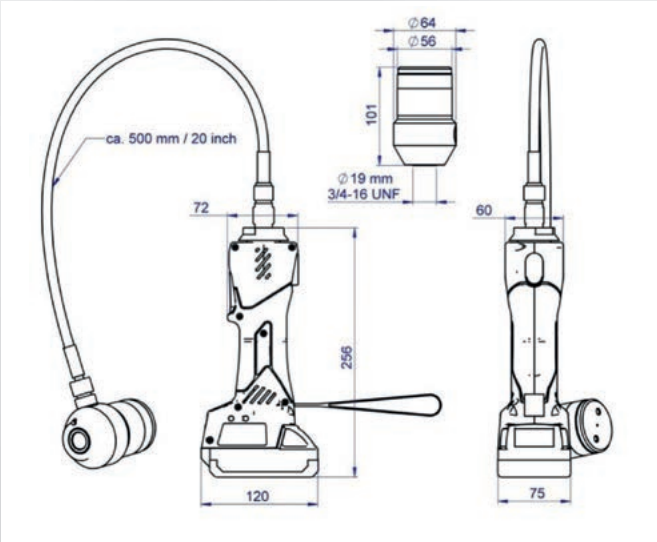
The flexible hand strap (K), which is attached to the drive unit (F), ensures perfect handling of the punch driver. A long hydraulic hose (C) makes punching even in difficult situations easy and comfortable. The integrated hydraulic pump is equipped with a microprocessor and generates the working pressure. The pump can be activated by pressing the Start/Stop button (D) and the necessary working pressure is built up, which pulls the load piston (A) inwards into the cylinder (B) with great force. The pressure is released by pressing the return button (E).

The LED (G) on the device base show the operating status of the punch driver. The high-performance lithium-ion battery (H) can be removed by pressing the release button (I) and is equipped with a charge level display (J). Electronic and mechanic excess pressure valves limit the maximum attainable pressure within the device and thus protect the hydraulic punch from excessive use and damage.

Perfect punching results will be achieved using the suitable ALFRA tools. An overview of our range of quality round and square punches can be found at the end of this operating manual.



A) Load piston
B) Cylinder
C) Flexible hydraulic hose
D) Start/Stop button
E) Return button
F) Drive unit
G) LEDIndicator
H) Battery
I) Battery release
J) Charge level display
K) Hand strap



PUNCHING METAL SHEETS

Gather together the appropriate tool set comprising a punch, punching die and tension bolt.
We recommend the use of high-quality ALFRA tools to achieve perfect punching results.

Do not punch more than one metal sheet at a time! Punching several layers of material in one punching process is not permitted!

1. Mark the exact hole position for the punching.
2. Now use a spiral or step drill to make the starting hole in the metal sheet.
3. Press the return button. The load piston moves to its starting position.
4. Screw the tension bolt into the load piston by hand until it stops. Always ensure that the entire length of the thread is used otherwise the tension bolt may pull out!
5. Place the spacer and punching die on the tension bolt. Then guide the tension bolt through the prepared hole.
6. Use the hand strap as shown below and turn the punch onto the tension bolt from behind. Align the punching die with the markers.
7. Move the punch into position and screw on the punch by hand in order to fix the complete assembly in place. Always ensure that the entire thread of the punch is used.
8. Press and hold the Start/Stop button until the hole is punched.

Risk of injury! Keep hands and fingers away from the punching die and punch whilst punching!

9. When punching holes through thin or soft metal sheets press the return button so that the load piston will return to its starting position. With any other metal sheet load piston and punching die will return automatically.
10. Unscrew the punch and remove the scraps of material from the punching die.

SPECIAL FEATURES

ALFRA electro-hydraulic punch drivers offer many useful features which will facilitate your work significantly. Among the main advantages of the battery-powered **Akku-Compact Flex® Punch Driver** are the following special features:

Automatic return thanks to pressure sensor

Owing to an automatic return feature the load piston returns automatically in its starting position. The hydraulic pump of the **Akku-Compact Flex® Punch Driver** is equipped with an electronic pressure sensor measuring the working pressure during the whole punching cycle. As soon as the pressure decreases after a hole is punched, the automatic return will be activated (with an after-run time of just half a second).

Stop the punching process manually when punching holes through thin (‹1.0 mm) or soft metal sheets! It is possible that the automatic return feature does not work properly!

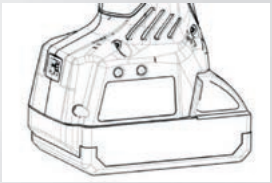
Service interval indicator thanks to integrated memory

The LED on the device base reminds you in time of the regular maintenance of your **Akku-Compact Flex® Punch Driver** thanks to an integrated memory. The non-volatile memory records the number of punching cycles. After 10.000 punching cycles the LED on the device base signals that the recommended service interval is reached. If the LED lights up green and red alternately, please send your hand-operated punch driver to ALFRA or an authorized reseller for maintenance and inspection.

Have your hydraulic punch driver maintained by ALFRA or an authorized reseller once a year, even if you have not carried out 10.000 punching cycles!

Malfunction indicator LED

The LED on the device base informs you about the operating status of the **Akku-Compact Flex® Punch Driver**. If the punch driver is operative, the LED lights up green. In case of a malfunction the LED glows red or orange and the punch driver is shut off automatically.
If you want to continue working with the punch driver, you need to perform a power reset: Remove the battery for a short time, then reinsert it. Should the trouble persist, please contact an authorized reseller or the ALFRA customer service. Our qualified service team will be glad to help you.



LED after insertion of the battery

LED off		Battery without function / voltage
LED green		Punch driver is operative
LED orange		Temperature error ➔ allow the punch driver to warm up or cool down

LED after punching process

LED green		Punch driver is operative
LED red/green		Service interval is exceeded ➔ device requires maintenance by the manufacturer
LED red		Operate value insufficient ➔ contact the customer service
LED red		Operate value wrong or punch driver defective ➔ device requires maintenance by the manufacturer
LED orange		Temperature error ➔ allow the punch driver to warm up or cool down

CHARGING THE BATTERY

The **Akku-Compact Flex® Punch Driver** is operated with a lithium-ion battery. The ALFRA rechargeable battery is characterized by its low weight and excellent performance. Moreover, it has no memory effect. So that you can continue your work as soon as possible, the handheld punch driver is delivered together with a quick charging unit.

The battery is delivered to you partially charged. Before use please charge it completely:

1. Connect the charger at 230V / 50Hz to the electrical outlet.
2. Slide the battery into the charger. The charging process begins automatically and takes approximately 30 minutes depending on battery capacity and state of charge.
3. After charging is complete, the LED on the charger will constantly glow green. Disconnect the charger from the mains or pull the plug.

You can check the state of charge of the battery by pressing the small key next to the four LED. All of the LED will light up when the battery is charged completely. If less than four LED light up, the battery capacity is accordingly lower.

Instructions for battery storage:
If you do not use the battery for a long period of time, please check its state of charge regularly.
During longer storage of the battery we recommend an ideal state of charge of 50% to 80%.
Please recharge the battery when the capacity is lower.

Recharge the battery at least once a year to avoid a deep discharging!

Fire hazard!
Remove all small electrical conductors (e. g. nails, paper-clips, keys or screws) from the surrounding area. Failure to do so can result in a short circuit as they can bridge the battery contacts!

Never charge the battery near highly flammable substances, gases or in an area where there is a risk of an explosion!

Only use genuine ALFRA batteries! Unsuitable batteries can reverse polarities or ignite!

Risk of injury!
Never attempt to open the battery! The battery fluid could result in severe burnings and skin irritations! If skin or eyes are exposed to battery fluid, immediately flush with plenty of water and seek medical attention!

DE ALFRA BLECHLOCHER | EN PUNCHING TOOLS | FR EMPORTE-PIÈCE | ES PUNZÓNES | IT PUNZONATRICE

BEDIENUNGSANLEITUNG | OPERATION MANUAL | MODE D'EMPLOI | MANUAL DE INSTRUCCIONES | MANUALE DI ISTRUZIONI

DE	EN	FR	ES	IT	 ALFRA BLECHLOCHER® MonoCut®	 ALFRA BLECHLOCHER® TriCut®	 ALFRA BLECHLOCHER® TriCut+®	 ALFRA BLECHLOCHER® TwinCut®
Geeignet für	**Qualified for**	**Approprié pour**	**Adecuado para**	**Adatta per**				
Normalstahl S235 F ≈ 370 N/mm²	Mild steel S235 F ≈ 370 N/mm²	Acier normal S235 F ≈ 370 N/mm²	Acero suave S253 F ≈ 370 N/mm²	Accaio medio S235 F ≈ 370 N/mm²	✔	✔	✔	✔
Edelstahl F ≈ 600 N/mm²	Stainless steel F ≈ 600 N/mm²	Acier inox F ≈ 600 N/mm²	Acero inoxidable F ≈ 600 N/mm²	Inox F ≈ 600 N/mm²	-	-	✔	✔
Materialstärke bei der Verwendung von	**Material thickness for**	**Épaisseur du matéri-au à l'utilisation de**	**Grosor de material a la utilización de**	**Spessore materiale**				
Ø 6 mm Zugschraube	Ø 6 mm tension screw	Ø 6 mm vis de traction	Ø 6 mm tornillo tensional	Ø 6 mm vite di trazione	-	1,5 mm	-	-
Ø 9,5 mm Zugschraube	Ø 9.5 mm tension screw	Ø 9,5 mm vis de traction	Ø 9,5 mm tornillo tensional	Ø 9.5 mm vite di trazione	2 mm	2 mm	-	2 mm
Ø 11,1 mm Zugschraube	Ø 11.1 mm tension screw	Ø 11,1 mm vis de traction	Ø 11,1 mm tornillo tensional	Ø 11.1 mm vite di trazione	-	-	2 mm	2,5 mm
Ø 19 mm Zugschraube	Ø 19 mm tension screw	Ø 19 mm vis de traction	Ø 19 mm tornillo tensional	Ø 19 mm vite di trazione	3 mm	3 mm	2,5 mm	3 mm
Durchmesser	**Diameter**	**Diamètre**	**Diámetro**	**Diametro**				
					12,7 mm/M12/PG7 - 152 mm	12,5 mm/M12/PG7 - 63,5 mm/M63	15,2 mm/PG9 - 63,5 mm/M63	12,7 mm/M12/PG7 - 63,5 mm/M63
Sonderanfertigungen	Custom-made products	Fabrication spéciale	Productos a medida	fuori serie	✔	✔	✔	✔
Ø für Vorbohren	**Pre-drill Ø**	**Ø pour préperçage**	**Ø para preperforación**	**Pre-foro Ø**				
Ø 6 mm Zugschraube	Ø 6 mm tension screw	Ø 6 mm vis de traction	Ø 6 mm tornillo tensional	Ø 6 mm tension screw	-	6,2 mm	-	-
Ø 9,5 mm Zugschraube	Ø 9.5 mm tension screw	Ø 9,5 mm vis de traction	Ø 9,5 mm tornillo tensional	Ø 9.5 mm tension screw	11 mm	10 mm	-	10 mm
Ø 11,1 mm Zugschraube	Ø 11.1 mm tension screw	Ø 11,1 mm vis de traction	Ø 11,1 mm tornillo tensional	Ø 11.1 mm tension screw	-	-	11,5 mm	11,5 mm
Ø 19 mm Zugschraube	Ø 19 mm tension screw	Ø 19 mm vis de traction	Ø 19 mm tornillo tensional	Ø 19 mm tension screw	20,5 mm	19,5 mm	19,5 mm	19,5 mm
Ø 28,3 mm Zugschraube	Ø 28.3 mm tension screw	Ø 28,3 mm vis de traction	Ø 28,3 mm tornillo tensional	Ø 28.3 mm tension screw	30,5 mm	-	-	-
Bearbeitungs-möglichkeit durch	**Usable with**	**Possibilité d'usinage avec**	**Posibilidad de mecanizado con**	**Utilizzabile con**				
Schraubenschlüssel oder Ratsche	Wrench or ratchet	Clé de serrage ou clé cliquet	Llave de tuercas o carraca	Chiave o cricchetto	✔ Bis/Up to/Jusqu'à/hasta/a Ø 89 mm	✔	✔	✔
Hydraulikantrieb	Hydraulic operation	Activation hydraulique	Accionamiento hidráulico	Operazione idraulica	✔	✔	✔	✔

(DE) ALFRA BLECHLOCHER | (EN) PUNCHING TOOLS | (FR) EMPORTE-PIÈCE | (ES) PUNZÓNES | (IT) PUNZONATRICE

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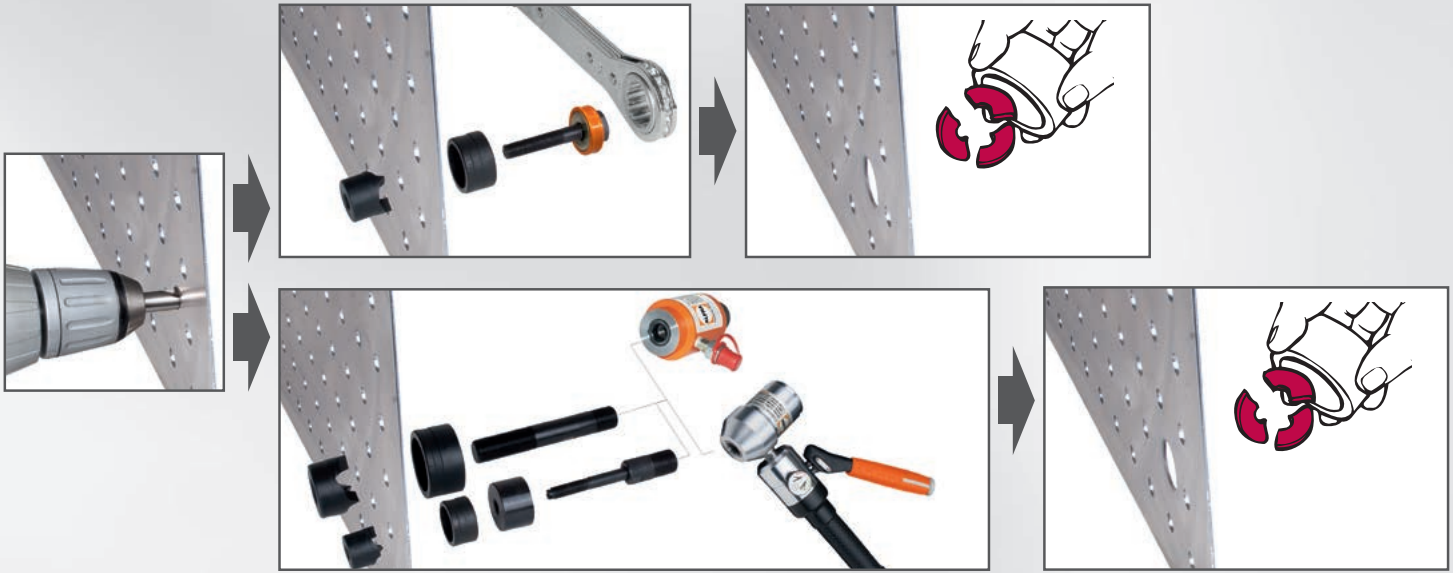

(DE) Achtung:
- Gewinde der Zugschrauben immer gut ölen.
- Aufsetzen der Stempelspitzen auf dem Matrizenboden vermeiden.

(EN) Attention:
- Threads always to be greased sufficiently.
- Punch tips must not touch die bottom.

(FR) Attention:
- Toujours bien huiler le filetage des vis de traction.
- Éviter de poser la pointe du poinçon sur l'outil inférieur.

(ES) Atención:
- Mantenga las roscas de los tornillos de ajuste siempre bien aceitadas.
- Evite la colocación de las puntas del troquel sobre el plato de la matriz.

(IT) Attenzione:
- Oliare le viti di trazione.
- Evitare il contatto tra punzone e matrice.