XPress1000SC™

Universal Pneumatic-Hydraulic Punching and Riveting System

Operating instructions Rev. 1.0 US

Translation of the original instructions

MUST READ BEFORE FIRST USE!

CE

09 / 2025

Wieländer+Schill
Professionelle Karosserie-Spezialwerkzeuge

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Safety instructions

1.1 Notes on instructions

Notice
The law stipulates that the user must be trained in the use of hydraulically driven punching and riveting tools. The instruction/training must be carried out by a W+S field representative or by a person authorized by WS Wieländer+Schill.

State of the art
This work tool corresponds to the current state of the art. For the device to function safely, professional and safety-conscious operation is required.

Handling
All actions necessary for correct operation are described in the operating instructions. No other working methods that are not expressly approved by the manufacturer may be practiced.

Disturbances
If malfunctions occur, you may only repair malfunctions yourself if the corresponding maintenance processes are marked.

1.2 Symbol explanation

Safety notice/danger
This information is used to ensure safe operation. If this is not observed, the safety of the operator cannot be guaranteed.

Danger!
Risk of crushing hands

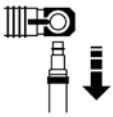
Danger!
Risk of crushing fingers

Danger!
Danger of environmental pollution

WARNING

Danger!
System is under pressure

WARNING



Compressed air supply
Before working on the machine, interrupt the compressed air supply.

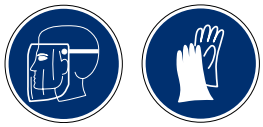
Always disconnect the hydraulic tool from the pressure when leaving the workplace.

NOTICE

Information
This information serves to provide a good understanding of the function of the product. This allows the full performance of the product to be exploited.

Operating manual
Be sure to read the operating instructions before using the product.
Make sure that the operating instructions are made accessible to the operating personnel.
The guarantee is void in the event of damage caused by operating errors!

WARNING



Wear face protection

Use protective gloves

1.3 General safety information

WARNING

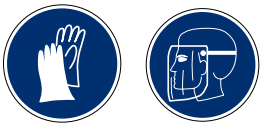
This operating manual only applies to the machine „***X**Press 1000 SC*“.

Make sure that the user has read the operating instructions before putting the machine into operation, understands the information and follows it.

CAUTION

Only original accessories may be used. There is a high safety risk if original tools or accessories are not used.

WARNING



It is essential to wear protective gloves and face protection when using the device, as incorrect operation or errors in the tool can cause metal parts to burst with high energy and fly away.

WARNING

The tool must never be used in potentially explosive areas.

NOTICE

Never throw or drop the tool. Never misuse the tool or lend it to untrained personnel.

The tool may only be used at ambient temperatures above 5 °C and up to a maximum of 50 °C.

NOTICE

Please observe the accident prevention regulations applicable in the respective countries.

CAUTION

Lay the compressed air lines so that there is no risk of tripping. Supply hoses lying around are a source of danger and can cause injuries.

For higher workplaces, only use approved and tested climbing aids (ladders).

When using the tool, ensure that it has a firm, secure footing.

The work area must be sufficiently lit, dimensioned and freely accessible.

Always store tools and machine parts in the designated place after use. Make sure the surface is clean.

NOTICE

Before starting work, always make sure that the air pressure is set according to the work requirements!

To operate the ***X****Press 1000 SC* Power Pack, only clean compressed air that corresponds to at least compressed air class 2 according to ISO 8573-1 may be used. Contaminants in the compressed air or the compressed air supply lines can cause damage to the device.

1.4 Intended use / functionality

The modular technology of the device allows the adaptation of many functional tools for different applications. The ***X****Press 1000 SC* Power Pack is the basic unit for a range of different hydraulic cylinders and the C-arm provided for them that can be combined.

Various adapters with different setting forces are also available. See performance diagrams in chapter 2.4.

The device system is supplemented by a variety of special tools for customer-specific applications. The innovative riveting tools of the ***X***Serie cover all areas of riveting and punching technology.

The ***X****Press 1000 SC* Power Pack is a pneumatic-hydraulic driven pressure intensifier with tandem pistons and a single-stage high-pressure pump, precise pressure control and integrated safety valve.

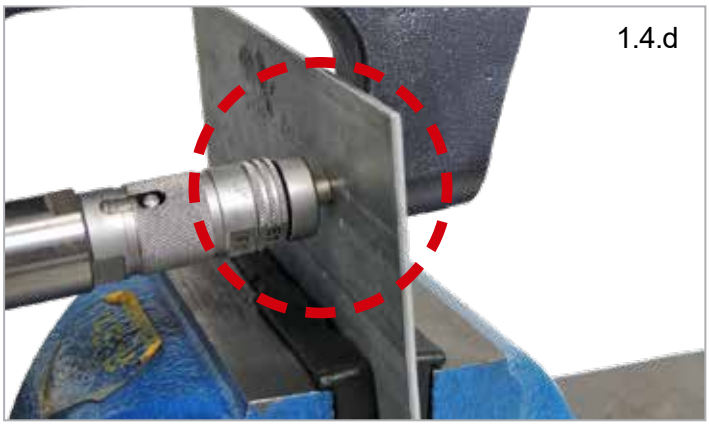
With a primary air pressure of 8 bar, a maximum hydraulic pressure of 1000 bar can be generated.

***X**Press* 1000 *SC* - Smart Control Function.
1. Accurate pre-positioning
2. Trigger after precise positioning, punching or riveting process.

Starting position

Attach the C-arm to the workpiece using dies and rivets.

Trigger the 1st stage using the control button.



The rivet can be pre-positioned precisely on the sheet metal.
The force during prepositioning is 100-200 N.

Is the rivet positioned correctly? Press the actuating button all the way down and thus trigger the 2nd stage.

This triggers the desired work process.

1.5 Improper use

WARNING

The hydraulic tool set is generally only approved for the applications intended by the manufacturer.

All uses other than those described under point 1.4 are considered improper use and are therefore not permitted.

1.6 Labelling

Marking on the ***X****Press 1000 SC* Power Pack

Type plate + Description

A Type designation
B max. hydraulic pressure
C Serial no. with production date
D CE marking
E Year of production
F Barcode
G WS Wieländer+Schill with address

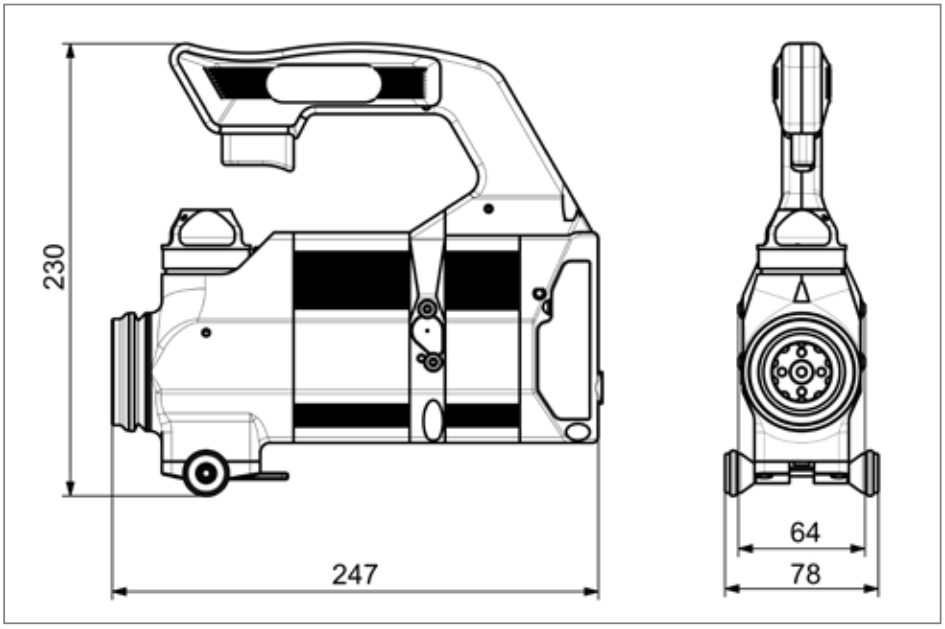
2

Technical specifications and data

2.1 Technical specifications

Permissible hydraulic OIL	Hydraulic oils according to DIN 51524 AFT oils according to DIN 51562-2 *Type HLP 22 - HLP 36*
Viscosity OIL	approx. 22 - 36 mm^2/s at 40°C
Filling quantity OIL	120cc
Minimum air pressure	8 bar / 116 psi
Maximum operating pressure hydraulic	1000 bar / 14504 psi
Compressed air	Quality class 2 (according to ISO 8573-1)
Temperature (ambient)	5 to 50 C° / 41 to 122°F
Storage temperature	-25 to 40 C° / -13 to 104°F
Required safety clothing	Protective gloves and face protection
Emission sound pressure level	75dB(A) LPAI
Device vibration	< 2.5 m/s^2 (ISO/FDIS 8662-11)

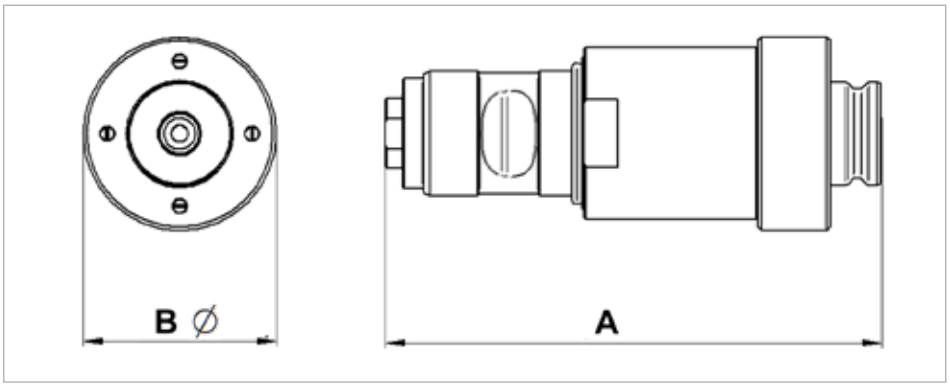
2.2 Technical data *XPress 1000 SC* Power Pack



Length	247 mm
Width	64 (78) mm
Height	230 mm
Weight	3,25 kg
Pressure max.	1000 bar
OIL volume	120 ccm

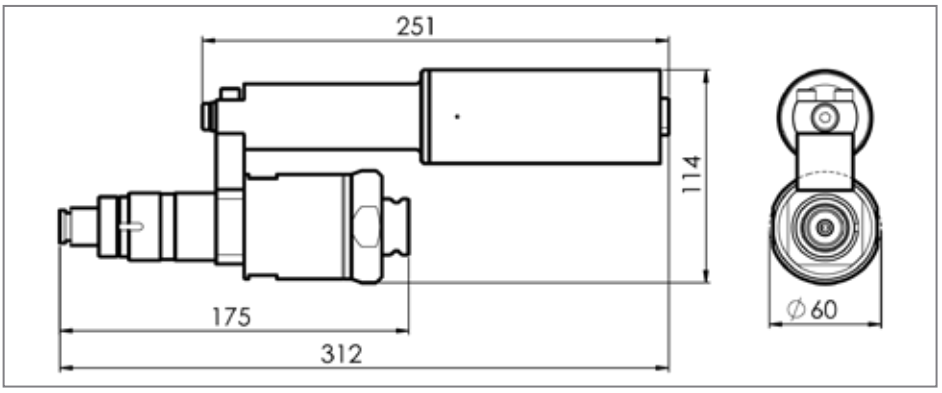
2.3 Power adapters and performance features

2.3.1 Short stroke cylinder SSC 35/25 / SSC 40/25



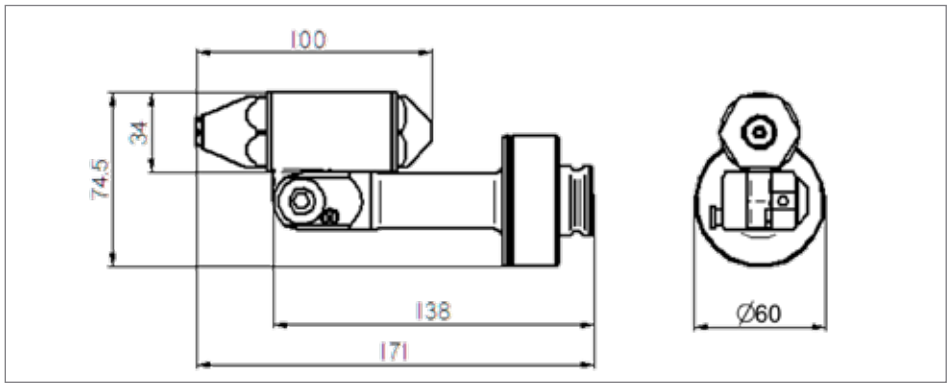
	SSC 35/25	SSC 40/25
A - Length	144 mm	150 mm
B - Ø Diameter	60 mm	60 mm
Stroke	25 mm	25 mm
Pressure max.	Kapitel 2.4	
Weight	1,4 kg	1,7 kg

2.3.2 PushPull PP90 (Retraction cylinder)



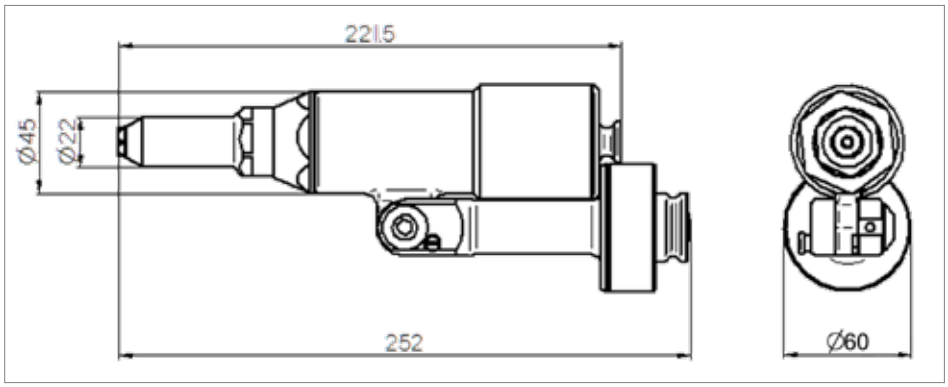
Length	312 mm
Diameter Ø	60 mm
Height	114 mm
Stroke	16 mm
Pressure max.	Chapter 2.4
Retraction force at 8 bar	approx. > 10 kN
Weight	2,6 kg

2.3.3 Blind rivet adapter BR 20



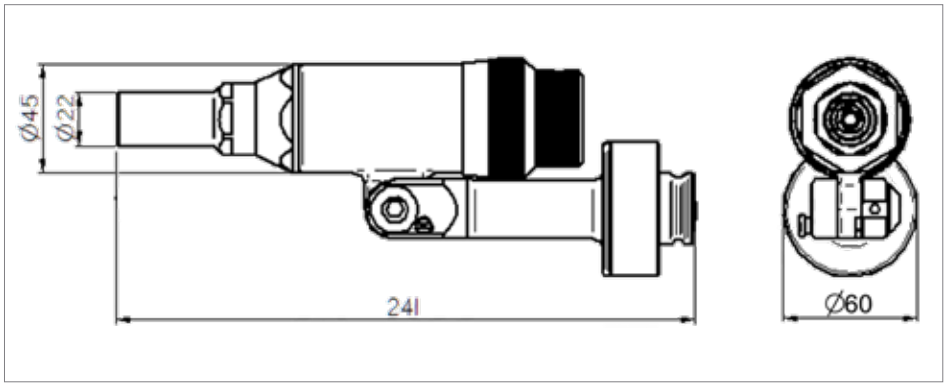
Length	171 mm
Wide	60 mm
Pressure max.	Chapter 2.4
Stroke	22 mm
Radius/Angle	120°
Interlock steps	30°
Weight	1 kg

2.3.4 Blind rivet adapter BR 50



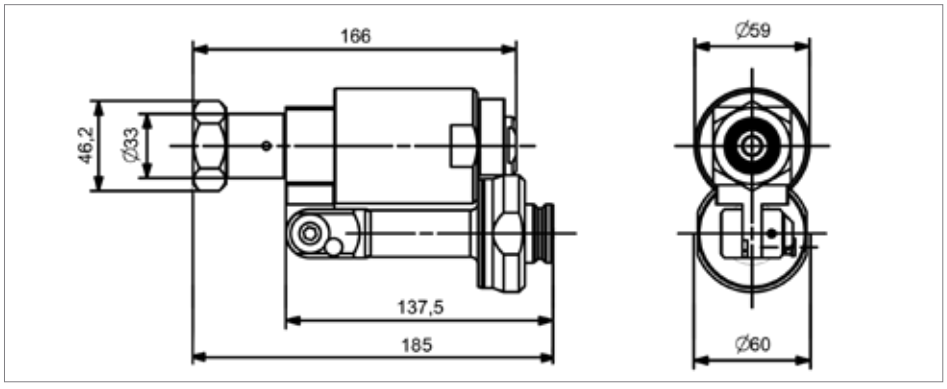
Length	252 mm
Wide	60 mm
Pressure max.	Chapter 2.4
Stroke	25 mm
Radius/Angle	120°
Interlock steps	30°
Weight	1,5 kg

2.3.5 Blind rivet nut adapter BRN 50



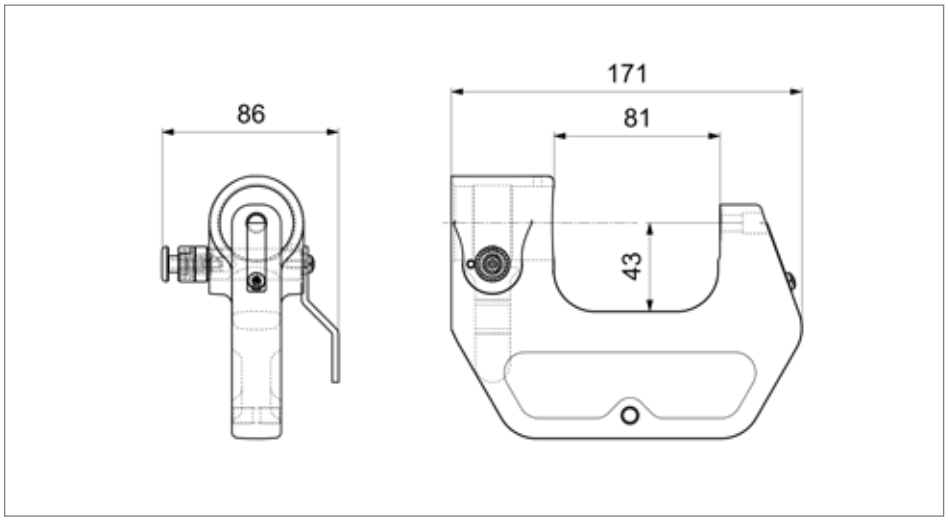
Length	241 mm
Wide	60 mm
Pressure max.	Chapter 2.4
Stroke	16 mm
Stroke limitation	0-16 mm
Radius/Angle	120°
Interlock steps	30°
Weight	1,65 kg

2.3.6 Blind rivet adapter BR 80



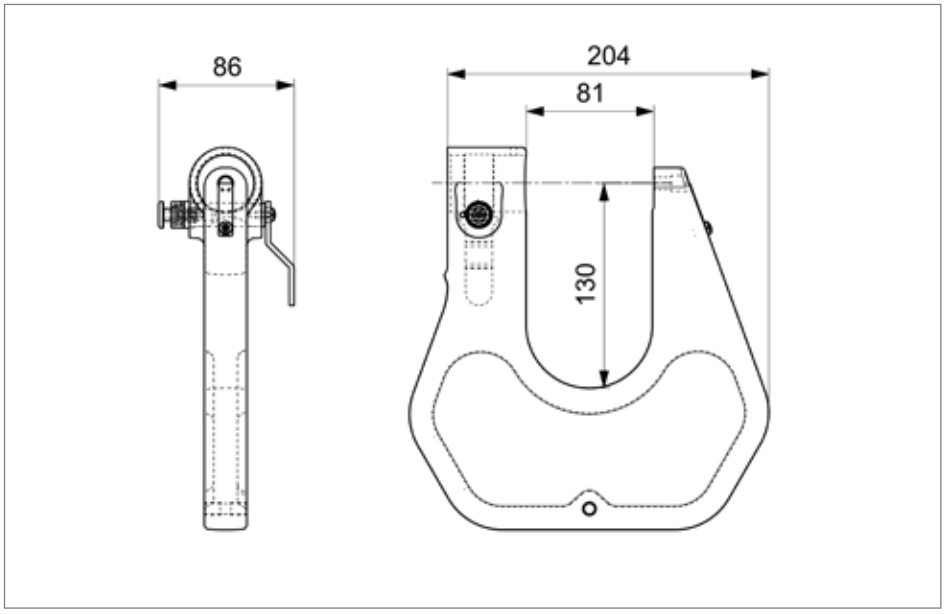
Length	185 mm
Wide	60 mm
Pressure max.	Chapter 2.4
Stroke	25 mm
Radius/Angle	120°
Interlock steps	30°
Weight	2,5 kg

2.3.7 C-arm GC 80/40



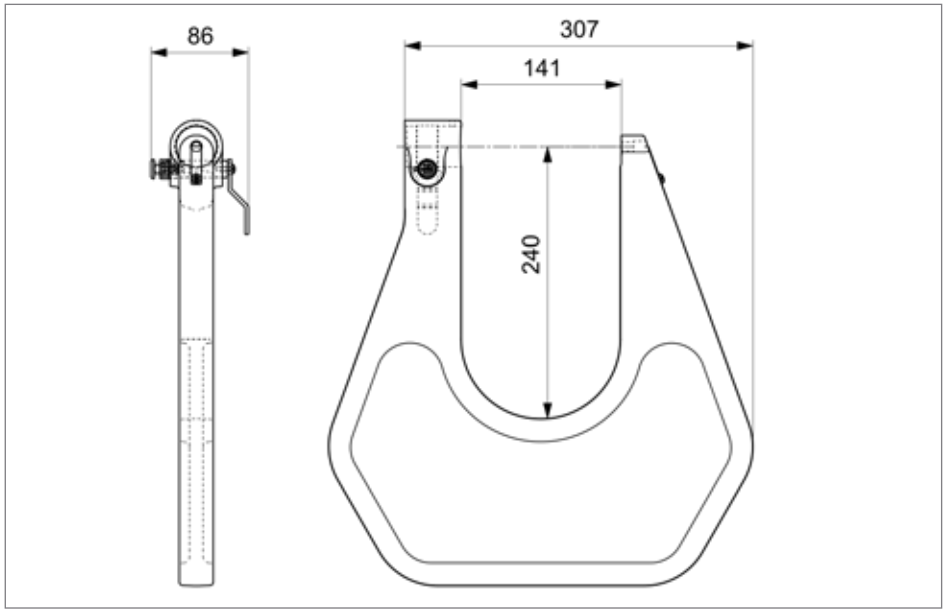
Wide	80 mm
Length	40 mm
Weight	2,3 kg
Safety locking	
additionally Hand grip	

2.3.8 C-arm GC 80/130



Wide	80 mm
Length	130 mm
Weight	5,7 kg
Safety locking	
additionally Hand grip	

2.3.9 C-arm GC 140/240

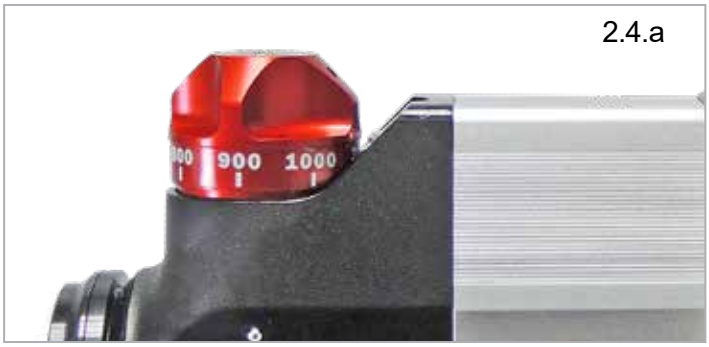


Wide	140 mm
Length	240 mm
Weight	13,6 kg
Safety locking	
additionally Hand grip	

2.4 Pressure regulation

The **pressure control valve** on the ***X****Press 1000 SC* Power Pack allows the operating pressure and thus the size of the available workforce on the tools to be adjusted.

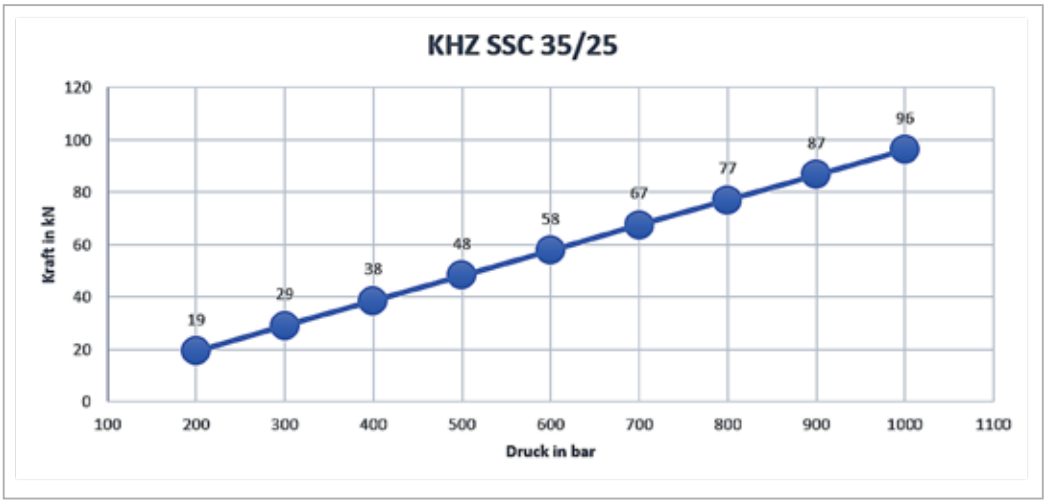
2.4.a



* The values given in the performance diagrams have a tolerance of +/- 15%

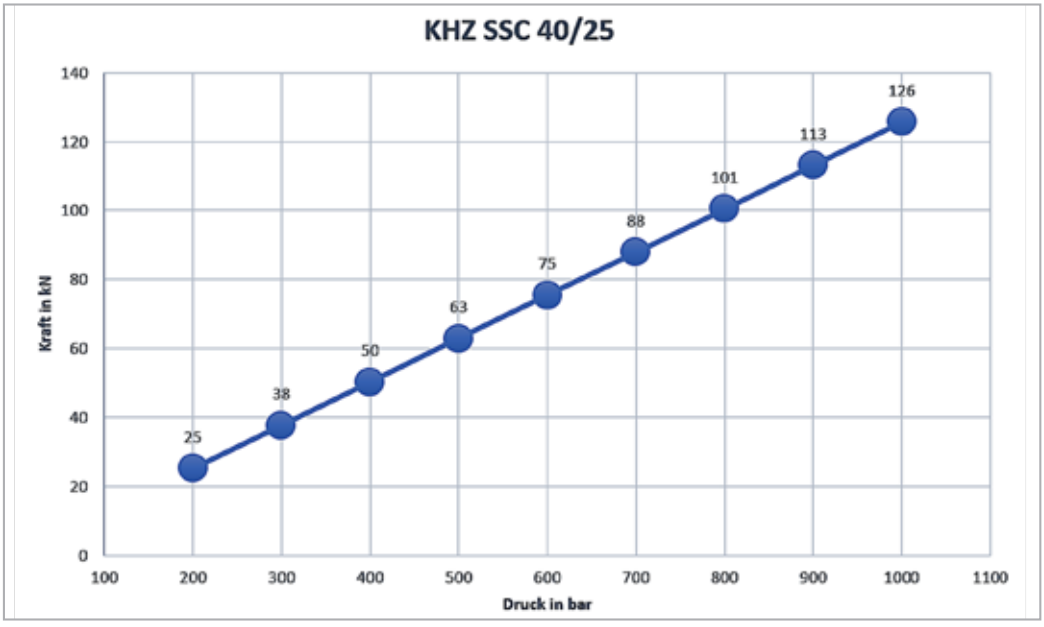
Pressure in bar	Force in kN
200	19
300	29
400	38
500	48
600	58
700	67
800	77
900	87
1000	96

Power diagram ***X****Press 1000 SC* Power Pack with short-stroke cylinder SSC 35/25



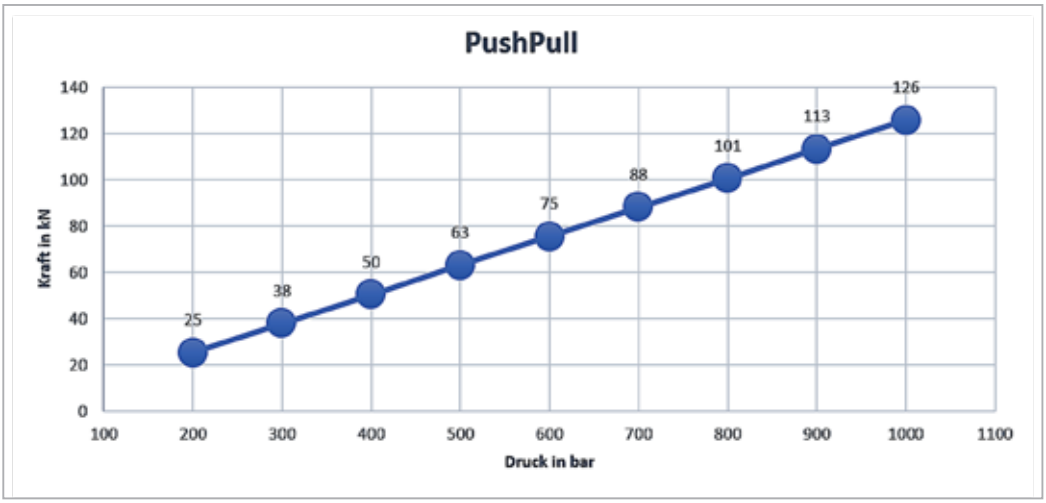
Pressure in bar	Force in kN
200	25
300	38
400	50
500	63
600	75
700	88
800	101
900	113
1000	126

Power diagram ***X****Press 1000 SC* Power Pack with short-stroke cylinder SSC 40/25



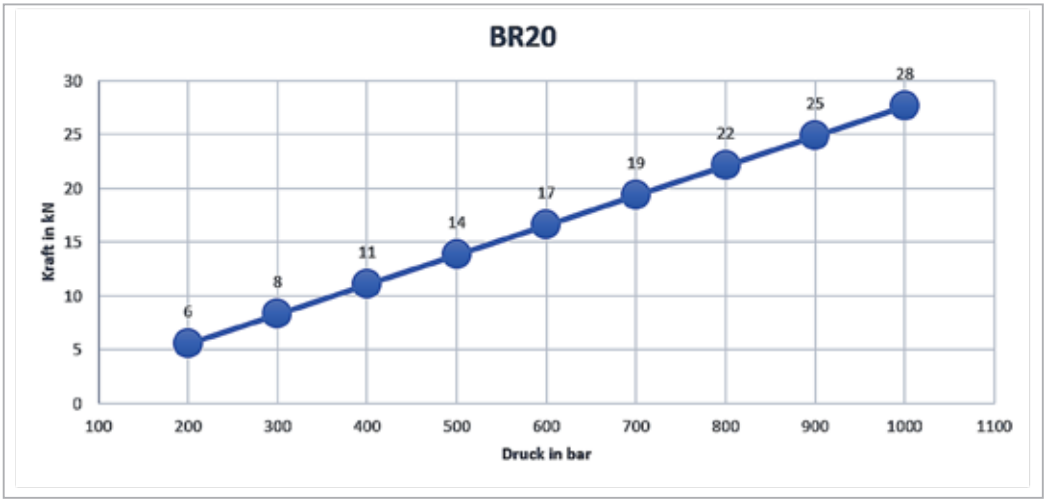
Pressure in bar	Force in kN
200	25
300	38
400	50
500	63
600	75
700	88
800	101
900	113
1000	126

Power diagram ***X**Press 1000 SC* Power Pack
with PushPull PP90 (Retraction cylinder)



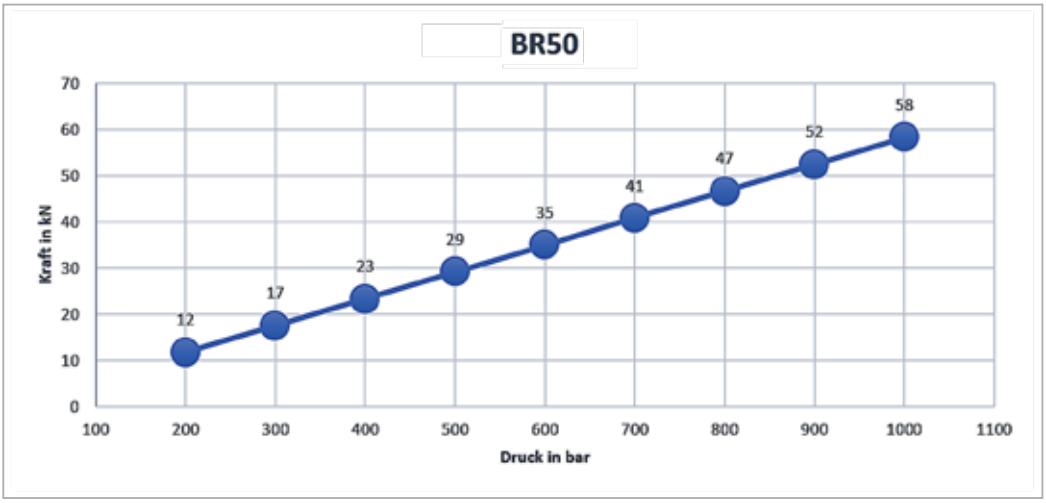
Pressure in bar	Force in kN
200	6
300	8
400	11
500	14
600	17
700	19
800	22
900	25
1000	28

Power diagram ***X**Press 1000 SC* Power Pack
with Blind rivet adapter BR 20



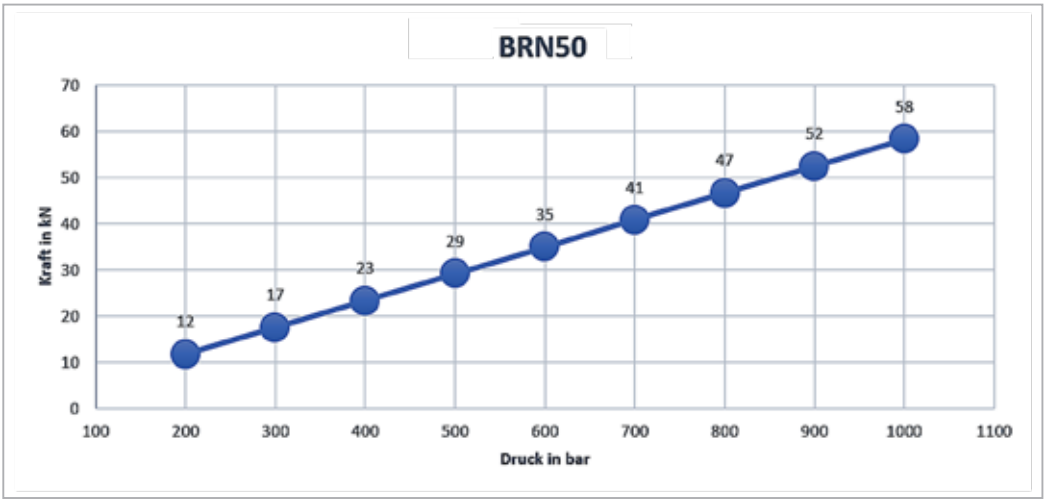
Pressure in bar	Force in kN
200	12
300	17
400	23
500	29
600	35
700	41
800	47
900	52
1000	58

Power diagram ***X**Press 1000 SC* Power Pack
with Blind rivet adapter BR 50



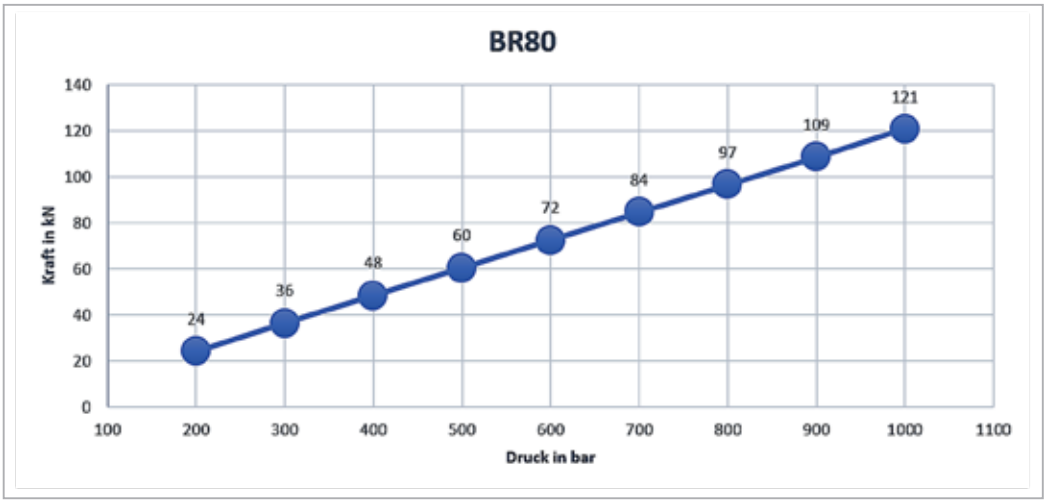
Pressure in bar	Force in kN
200	12
300	17
400	23
500	29
600	35
700	41
800	47
900	52
1000	58

Power diagram ***X**Press 1000 SC* Power Pack
Blind rivet nut adapterter BRN 50



Pressure in bar	Force in kN
200	24
300	36
400	48
500	60
600	72
700	84
800	97
900	109
1000	121

Power diagram ***X**Press 1000 SC* Power Pack
with Blind rivet adapter BR 80



3

Installation

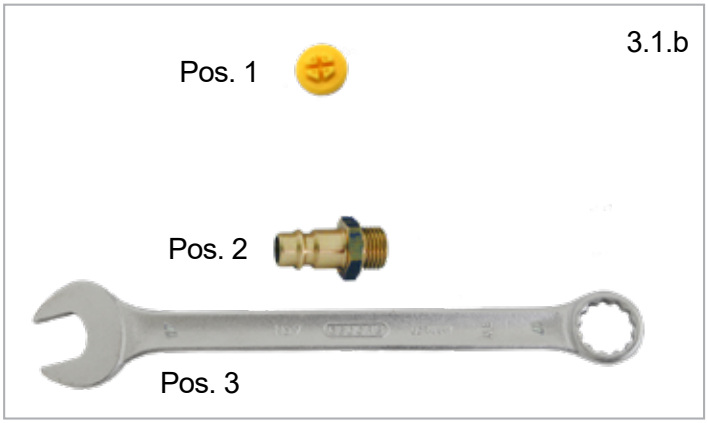
3.1 Compressed air connection

The ***X**Press 1000 SC* Power Pack is supplied without a compressed air connection as standard.

Remove the cap before use.


3.1.a

Remove the yellow cap (item 1).
Install the appropriate compressed air connection (item 2) in the G1/4“ thread using a size 17 open-end wrench (item 3).

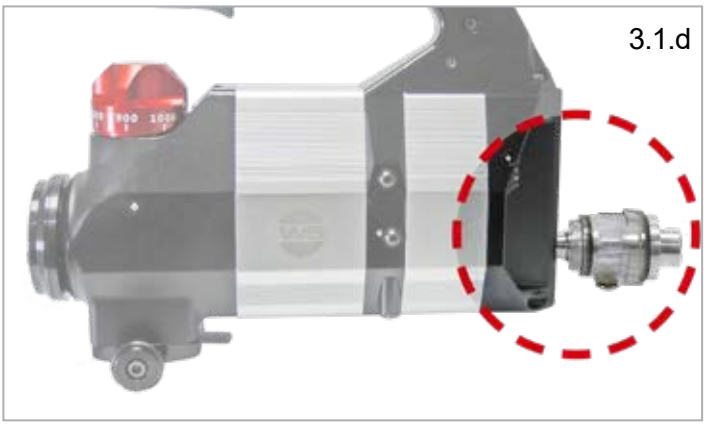


3.1.b

Mounted compressed air connection.


3.1.c

When operating with dry compressed air, use the miniature oiler with item no. 637103 from the accessories range. The oiler is screwed in between the device and the compressed air connection. The oiler must always be filled with pneumatic oil. The pneumatic oil is available under item no. 698001 available in the accessories range.


3.1.d

3.2 Connect *XPress 1000 SC* Power Pack

WARNING

The ***X****Press 1000 SC* Power Pack must be checked for any damage, oil leaks or loose components before each use. Such defects in the device can lead to serious injuries during operation.
Defective components or any defects must be replaced or repaired by qualified personnel.

NOTICE

The air pressure in the supplying compressed air network must not exceed 10 bar / 145 psi exceed.

The compressed air hose must be laid in such a way that people cannot trip!

NOTICE

The ***X****Press 1000 SC* Power Pack must be connected to the compressed air hose.

Always place the ***X****Press 1000 SC* Power Pack on a non-slip surface. The compressed air hose must be laid in such a way that the device is stored safely and cannot be torn off.

NOTICE

The ***X****Press 1000 SC* Power Pack may only be used in work areas that are free from heat sources (max. 50 °C/ 120 °F), as well as corrosive liquids, greases and oils.

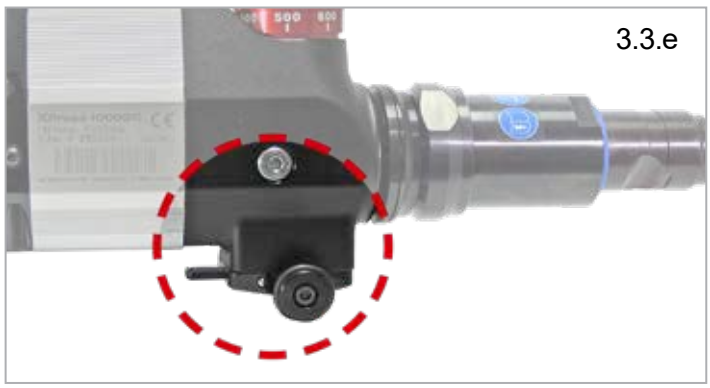
3.3 Connecting the force adapter - Short-stroke cylinder SSC 35/25 + SSC 40/25

1. Fold the relief lever on the ***X****Press 1000 SC* Power Pack forward.

2. Pull/press locking ring backwards.
The inner red marking ring becomes visible.

3. Place the short-stroke cylinder with quick coupling in the middle.
With the locking ring pressed backwards, push the short-stroke cylinder with the quick coupling into the coupling receptacle under pressure.

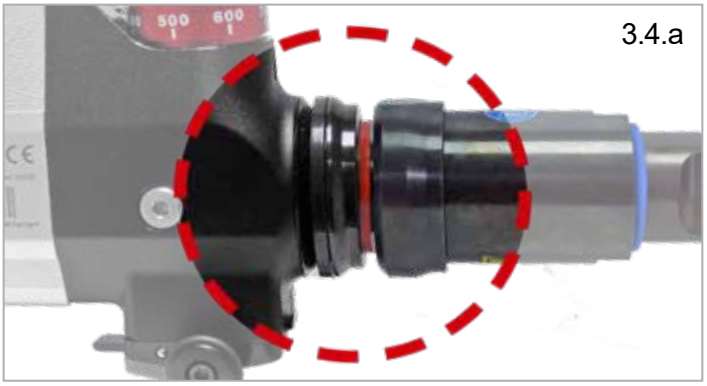
4. Release the locking ring on the coupling holder.



5. Fold the relief lever backwards.

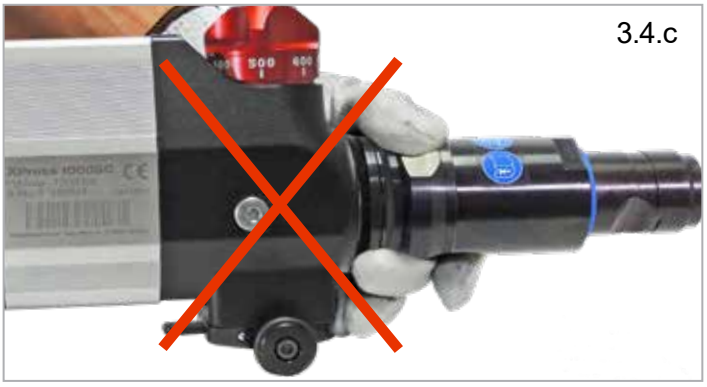
Attention!
The quick-release couplings on the ***X****Press 1000 SC* Power Pack and the couplings on the adapters must be clean and free of dirt and damage!

3.4 Correct and incorrect connection / handling of short-stroke cylinders SSC 35/20 + SSC 40/25



1. Wrong !
If the red marking ring on the quick coupling is still visible, the adapter is not properly engaged.

2. Correct
Press the adapter firmly into the holder. The locking ring must snap into place and lie flat all around, otherwise the lock will not be closed.



3. Wrong !
When working, never hold the riveting tool by the coupling, otherwise the module may come loose from the riveting tool.

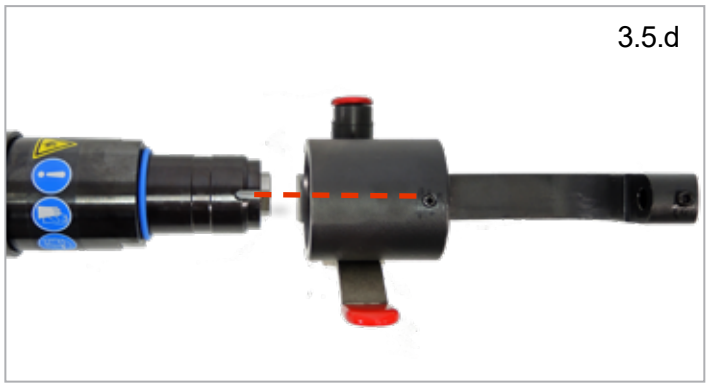
4. Correct
Example short-stroke cylinder with C-arm.

3.5 Install the C-arm

1.Press in the locking button on the locking mechanism.

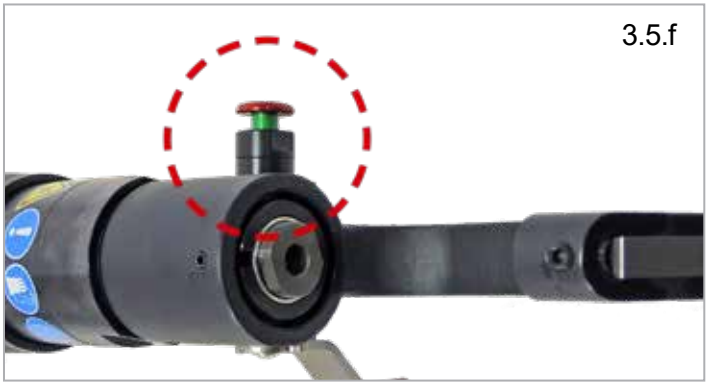
2. Open the locking lever with the safety button pressed.

3. To make it easier to slide the C-arm onto the short-stroke cylinder, use Molycote Dx Paste (50g) item no. 700144.



4. Place the C-arm in the middle of the holder of the short-stroke cylinder. Make sure that the guide groove points in the direction of the guide pin in the C-arm.

5. Slide the C-arm completely onto the cylinder holder. Close the locking lever.



6. The C-arm is correctly installed when the safety button pops out completely. (Green marked area visible). This process is indicated by an audible click.

Attention!
The hole in the C-arm must be free of dirt and damage. The locking mechanism must engage smoothly into the locking position.
The locking lever on the C-arm must no longer be able to be swiveled once it has snapped into place!

Damaged or defective components can cause serious injuries during operation and must not be used under any circumstances!

3.6 Assembly of the rivet adapters

1. Hold the side sheet metal with your finger to screw in the riveting tool.

2. Screw the riveting tool required for the work process into the holder of the C-arm. Tighten the rivet head hand-tight.
Do not use force!

3. Screw in the extension on the opposite side and tighten it hand-tight.

4. Screw the corresponding counterpart to the rivet insert into the extension and tighten it hand-tight.
Do not use any tools to tighten. Hand tighten only!

5. Before each assembly of the rivet inserts, the correct affiliation of the setting head and closing head to the rivet must be found in the repair instructions.

After each riveting operation, the tightness of the rivet heads must be checked. Rivet inserts that have come loose pose a danger and can lead to serious injuries during operation.

NOTICE

Before each operation, the operating pressure setting on the ***X****Press 1000 SC* Power Pack should be checked.
If the pressure setting is too low, the rivet will not be pressed in completely!
If the pressure setting is too high, the pressing forces are so high that the sheet metal composite is deformed to an unacceptable extent.

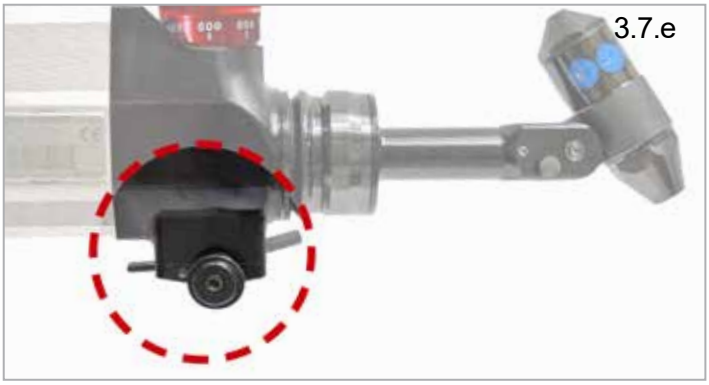
3.7 Connect blind rivet adapter using the BR20, for example

1. Fold the relief lever on the ***X****Press 1000 SC* Power Pack forward.

2. Pull/press locking ring backwards.
The inner red marking ring becomes visible.

3. Place BR20 with quick coupling in the middle. With the locking ring pressed backwards, push the BR20 with the quick coupling into the coupling receptacle under pressure.

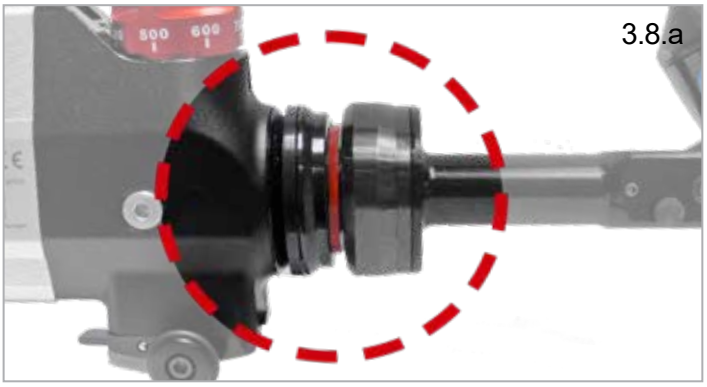
4. Release the locking ring on the coupling holder.



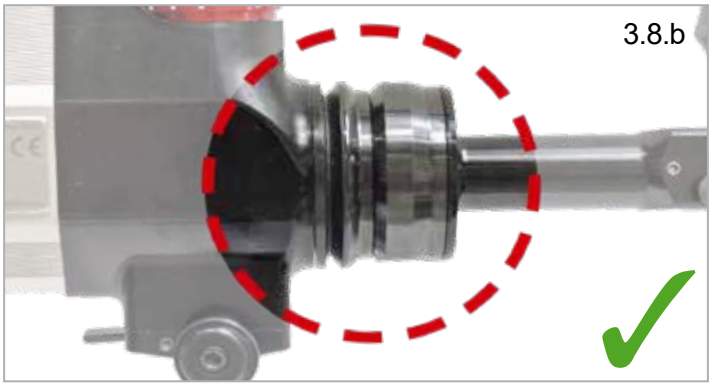
5. Fold the relief lever backwards.

Attention!
The quick coupling on the ***X****Press 1000 SC* Power Pack as well as the coupling connection on the respective adapter must be clean and free of dirt and damage!

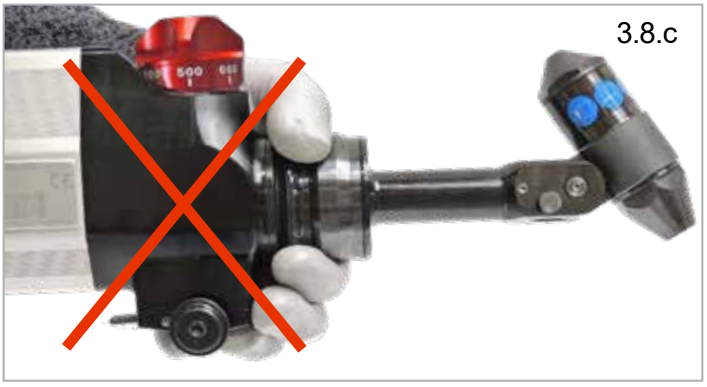
3.8 Correct and incorrect connection / Example blind rivet adapter BR20



1. Wrong !
If the red marking ring on the quick coupling is still visible, the adapter is not properly engaged.



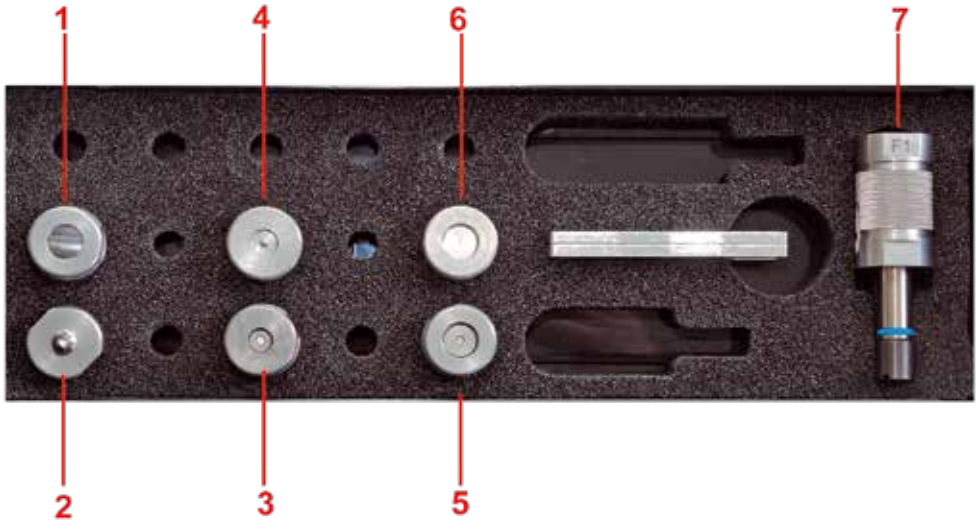
2. Correct
Press the adapter firmly into the holder. The locking ring must snap into place and lie flat all around, otherwise the lock will not be closed.



3. Wrong !
When working, never hold the riveting tool by the coupling, otherwise the module may come loose from the riveting tool.

4. Correct
Example power adapter BR20

3.9 Special riveting accessories Tool Box RS-03



Overview riveting inserts Tool Box RS-03

N°	Designation	Code	Item N°	Item N° Set
1 2	Extraction mandrel Extraction die	A1 A2	700250 700251	700221
3 4	Die head Rivset Rivet 3 mm Closing head Rivset Rivet 3 mm	D1 D2	700263 700262	700227
5 6	Die head Rivset Rivet 5 mm Closing head Rivset Rivet 5 mm	E1 E2	700261 700260	700226
7 8	Spacing adapter with nut Set of installation wrenches	F1	700220 700299	

Riveting principles

Pressing-out tools for rivets

				
A1 + A2				

Necessary special accessories for semi tubular and punch rivets

				
	D1 + D2	**E1 + E2**		**F1**

4

Possible applications with the short-stroke cylinder SSC 35/25 + SSC 40/25

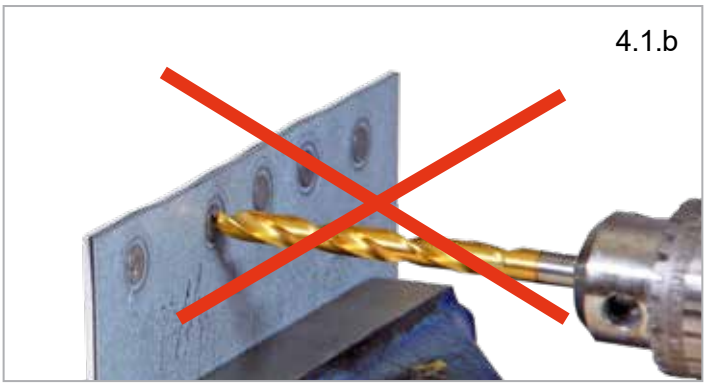
4.1 Pressing out rivets with Tool Box RS-03

4.1.a

Old or defective rivets often need to be removed from the sheet metal structure when repairing body panels. Instead of drilling out the old rivets, they can be pressed out of the sheet metal structure using the extraction mandrel **A1** and the corresponding extraction die **A2**, thereby minimizing damage. Before, mark with a center punch Art.N° 628006 from inside.

But this is only possible with access from both sides !

4.1.b



4.1.c

4.1.d

4.1.e

4.2 Processing of self-pierce rivets and flow-form rivets

Processing of self-pierce rivets with the short stroke cylinder SSC 35/25 + SSC 40/25 and flow-form rivets with the PushPull Cylinder

Tool Box RS-03 with mandrels and dies
Mounting and intended user

Three C-arms are currently available to process rivets with the tool box RS03.

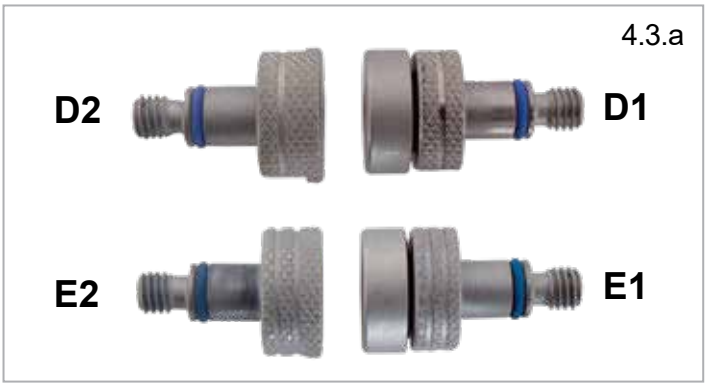
GC 80/40	Item N° 700070	Opening depth up to 40 mm
GC 80/130	Item N° 700071	Opening depth up to 130 mm
GC 140/240	Item N° 700072	Opening depth up to 240 mm

4.3 Setting semi-tubular punch rivets with Tool Box RS-03

NOTICE

Before each operation check the setting of the air pressure on the Power Pack ***X****Press 1000SC* !

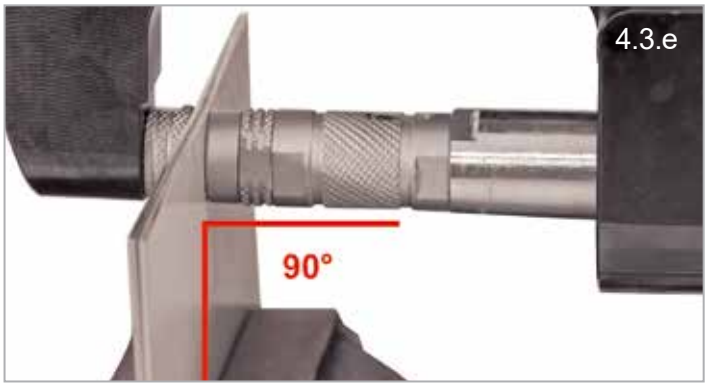
Extra care must be taken to ensure that the rivets that are used are properly seated when installing semi-tubular punch rivets.



Die head D1 3 mm or Item N° 700263
Die head E1 5 mm and Item N° 700261
Closing head D2 3 mm Item N° 700262
Closing head E2 5 mm Item N°700260

Dies and heads must not be damaged because this would make correct riveting impossible. If in doubt, always replace the defective rivet punch with genuine replacement parts. When using non-genuine parts the manufacturer does not accept any liability claims.

Before processing a rivet group, a sample rivet must be set in a sample sheet combination.



During each riveting operation, make sure that the closing head is placed on the sheet metal pairing and not on the rivet. It is also important that the C-arm (respectively the riveting tool) as close to a right angle as possible.

5

Possible applications with the PushPull PP90 (retraction cylinder)

5.1 Connecting the PushPull PP90 (retraction cylinder)

Connect PushPull to the Power Pack.

Unscrew the plug with a 5 mm Allen key

Install locking plug connection with 12 mm open-end wrench.

ATTENTION! PushPull must be positioned to the left of the Power Pack for coupling.

Coupling is not possible in any other position.

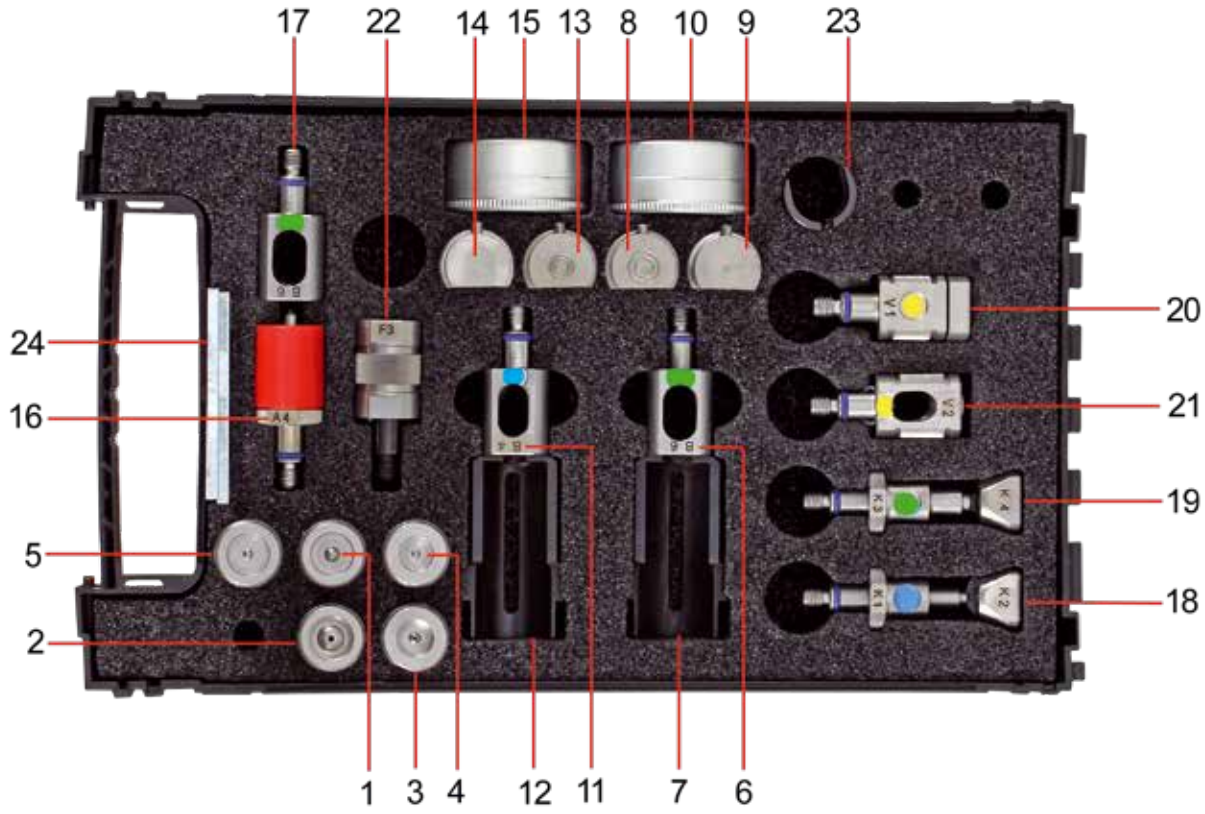
To connect the PushPull cylinder correctly to the quick coupling of the ***X****Press 1000SC* Power Pack, it is essential to follow the instructions in sections 3.3 + 3.4.

Connecting the air hose

Loosen and remove the PushPull union nut.

Mount the C-bracket on the PushPull cylinder as described in section 3.5.

5.2 Special riveting accessories - Tool Box RS-07



Overview tool insets / Rivet inserts Tool Box RS-07

N°	description	ID N°	marking	item N°	set item N°
1	Riveting die FFN 8mm S28-S68	C3		700266	700338
2	Closing die FFN 8mm S08-S68	C4		700267	
3	Closing die FFN 6mm S0-S6	C1		700256	700340
4	Riveting die FFN 6mm S0-S6	C2		700257	
5	Riveting die FFN 8mm S08-S018	C5		700276	700339
6	Die-plate 8 mm	B6	green	700270	700353
7	Counter bracket 8 mm	G2		700268	
8	Blanking stamp Ø 8 mm (up to 8,6 mm metal sheet)	B8		700342	
9	Blanking stamp Ø 8 mm (up to 3,6 mm metal sheet)	B5		700344	
10	Blanking bit 8 mm	SKR		700296	
11	Die-plate 6 mm	B4	blue	700264	700352
12	Counter bracket 6 mm	G1		700273	
13	Blanking stamp Ø 6 mm (up to 8,6 mm metal sheet))	B7		700345	
14	Blanking stamp Ø 6 mm (up to 3,6 mm metal sheet)	B3		700343	
15	Blanking bit 6 mm	SKR		700294	
16	Pressing-out awl with PU-spring	A4		700341	
17	Die-plate 8 mm	B6	green	700270	
18	Back shaping and blanking awl 6 mm	K1+K2	blue	700348	
19	Back shaping and blanking awl 8 mm	K3+K4	green	700349	
20	Setting die SSPR 4 mm	V1	yellow	700333	700350
21	Solid self-piercing-rivet die SSPR 4 mm	V2		700277	
22	Extention 26 mm	F3		700337	
23	*PushPull* Coupling			700280	
24	Assembly tools			700299	

5.3 Tools for riveting, pressing-out, blanking and calibration

Necessary special accessories for flow form rivets

Extenion

Solid
Self-Piercing-Riveting

				
C3 + C4 (8 mm)	**C5 + C4** (8 mm)	**C2 + C1** (6 mm)	F3	V1 +V2 (4mm)

Back shaping, blanking and calibration

Pressing-out
self-piercing-rivets

							
B4	**K2 + K1**	**SKR 6 mm**	**B6**	**K4 + K3**	**SKR 8 mm**	**B6**	**A4**

Full blanking and calibration 6 mm

Full blanking and calibration 8 mm

								
B4	**G1**	**B3**	**B7**	**Coupling**	**B6**	**G2**	**B5**	**B8**

Punching round or oval shapes and pressing out form-fitting rivets require high forces.The PushPull cylinder enables hydraulic retraction of the punch from the material.

In combination with the ***X****Press 1000SC*, the Push-Pull cylinder has a force potential in the press direction of max. 126 kN at 1000 bar. This allows the setting and forming forces to be applied to almost all common metal rivets.

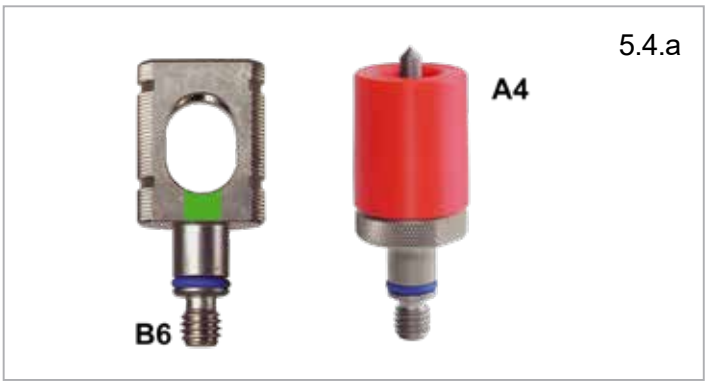
The retraction forces are approx. > 10 kN at 8 bar compressed air. This potential is required to pull the tools out of the material again during punching or embossing.

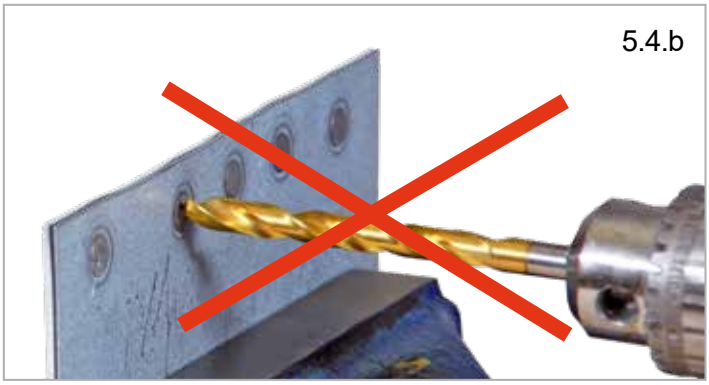
5.4 Assembly and use of tool sets Tool Box RS-07

See also sections 3.6 and 5.8.

Three C-arms are currently available to process rivets with the tool box RS-07.

GC 80/40	Item N° 700070	Opening depth up to 40 mm
GC 80/130	Item N° 700071	Opening depth up to 130 mm
GC 140/240	Item N° 700072	Opening depth up to 240 mm

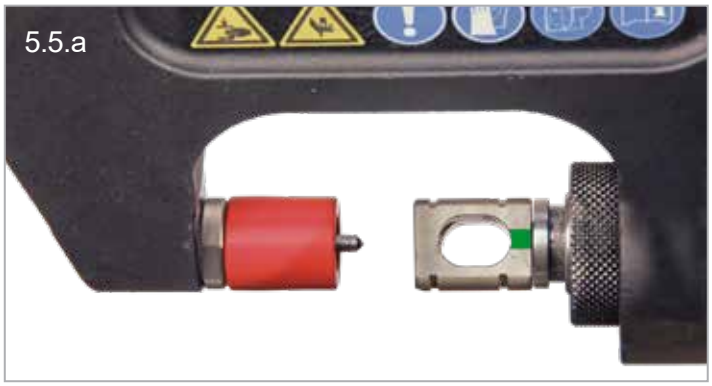




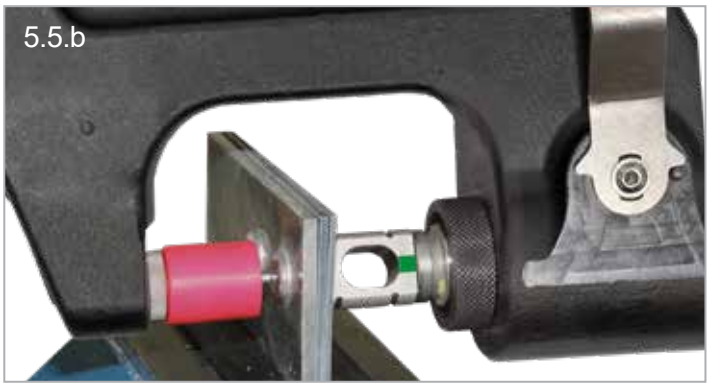
When repairing body panels, it is often necessary to remove these or old and defective rivets from the sheet metal composite.

To avoid having to drill out these rivets, the old rivets can be gently pressed out of the sheet metal connection using the **A4** press-out mandrel with PU spring and the corresponding **B6** die.

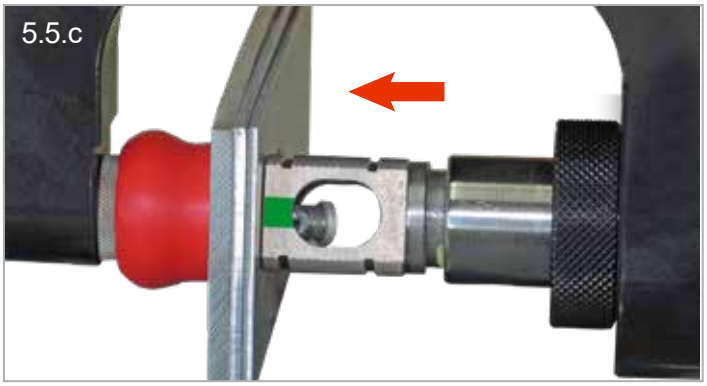
5.5 Pressing out punch rivets



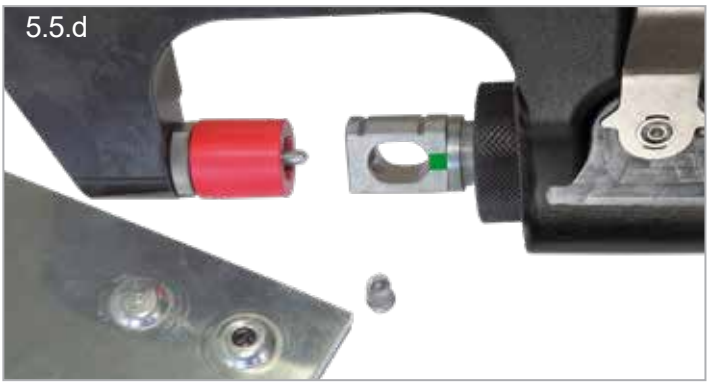
Punch mandrel A4 and die B6 mounted on C-bracket GC 80/40.



Place the punch mandrel A4 in the rivet grain.

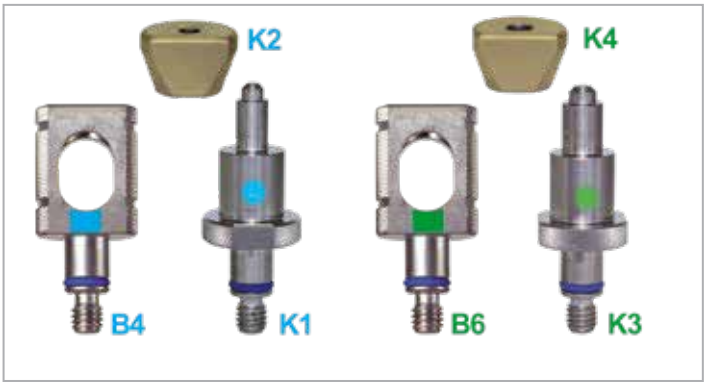


The punch rivet is pressed out. The PU spring is pre-tensioned to protect the sheet metal.



The punch rivet has been completely pressed out without damaging the sheet metal.

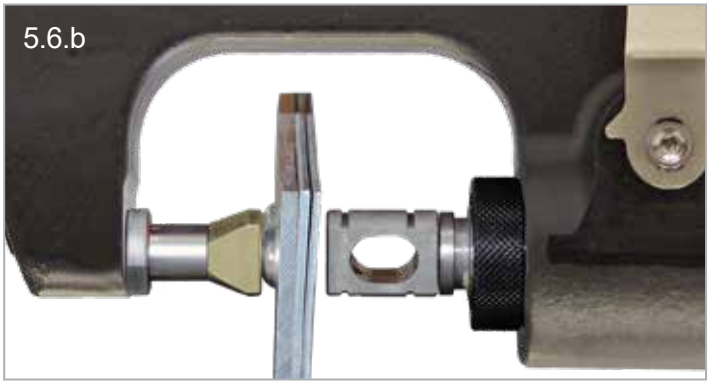
5.6 Sheet metal forming



Die set K1+K2+B4 = 6 mm rivet/punch hole
Die set K3+K4+B6 = 8 mm rivet/punch hole

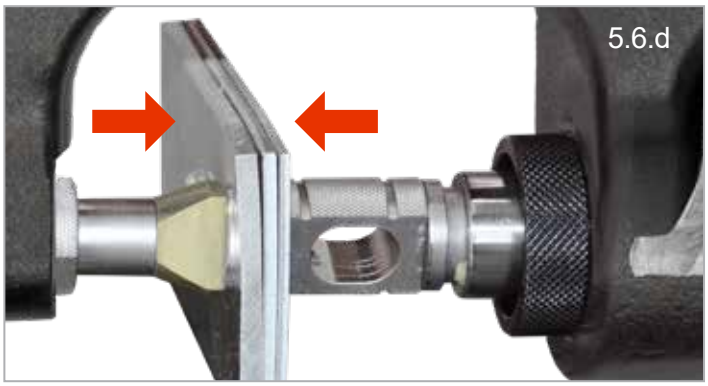
Check the air pressure on the ***X****Press 1000SC* PowerPack before each operation!

Install the return forming/punching mandrel and return forming punch as well as the die as shown in the illustration.



Position the back shaping stamp on the closing head stud

Set the pressure control valve for the ‘back forming’ application according to the manufacturer‘s specifications. (Example image)

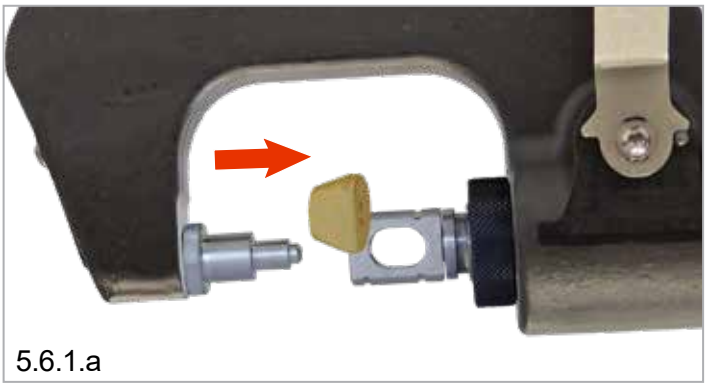


Apply back shaping closing head stud.

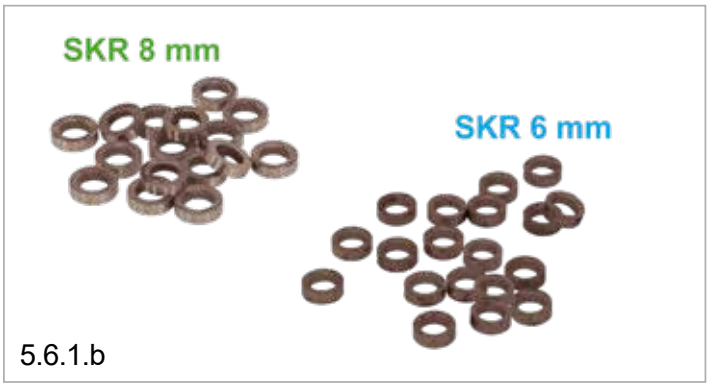
After the return punch, the defective sheet metal component can be removed and the new body panel can be fitted.

5.6.1 Punching and calibration *(new and old metal components)*

In order to punch and calibrate the new metal combination (repaired metal + old intact sheet metal), remove the back shaping stamp from the punch stud and install the corresponding blanking bits.

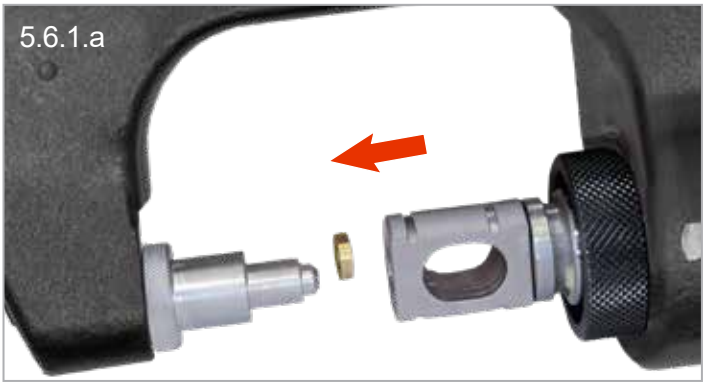


Remove the back shaping stamp from the punch stud.

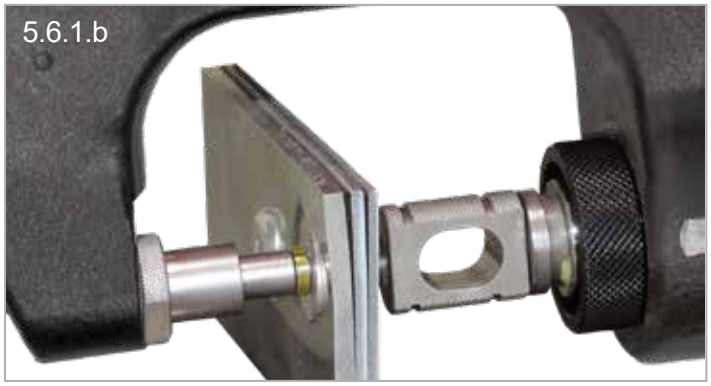


Select the blanking bits in accordance to the punch stud.

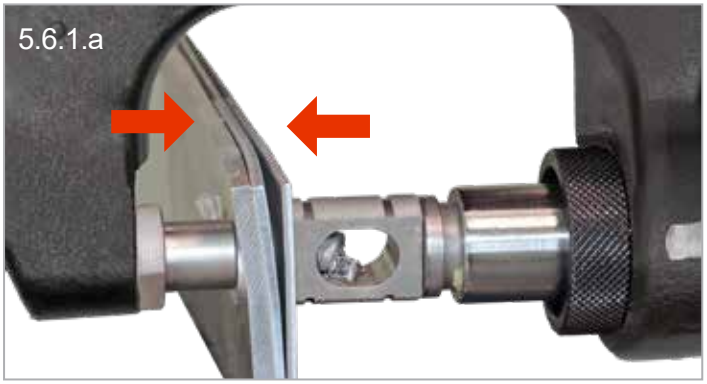
Check the pressure of the hydraulic actuator prior to each use!



Insert the blanking bit on the punch stud.



Position blanking bit with punch crown centred on the back shaped closing head stud.



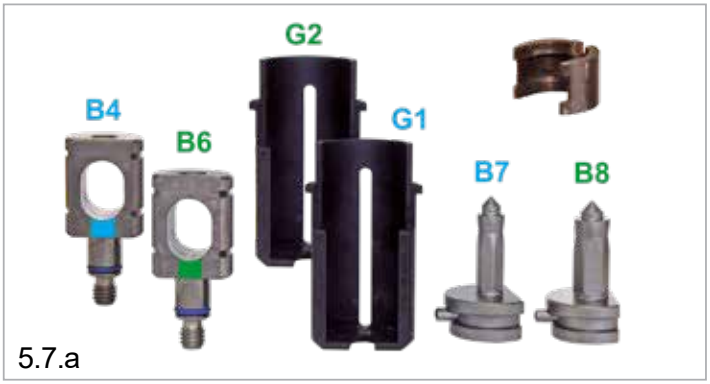
Punch and calibrate of the new metal combination.

The blanking bit can be used several times.

The following working process „Processing of flow-form-rivets“

see chapter 5.9.

Assembly of tool sets - hole punching and calibrating (Ø 6 and 8 mm) of new metal connections up to **8,6 mm** with blanking bits.



5.7.a

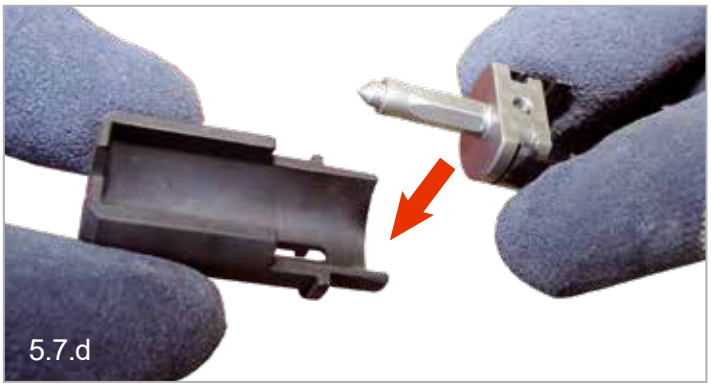
Tool sets for full blanking of sheet combinations until 8,6 mm.


5.7.b

In order to guarantee the correct application of die blanking bits use the punch dies **B7** and **B8** accordingly.


5.7.c

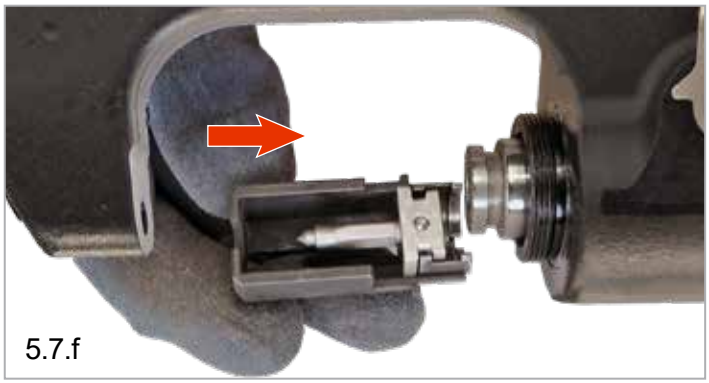
Push the -coupling onto the blanking die **B7**/**B8**, using the corresponding guide.


5.7.d

Blanking die + PushPull-coupling have to be positioned into the Counter bracket holder **G1**/**G2**.


5.7.e

The cylinder pin of the punch die must be in accordance with the long hole guide of the counterholder.


5.7.f

Push the complete tool set on the XPress coupling.


5.7.g

Install union nut and tighten.

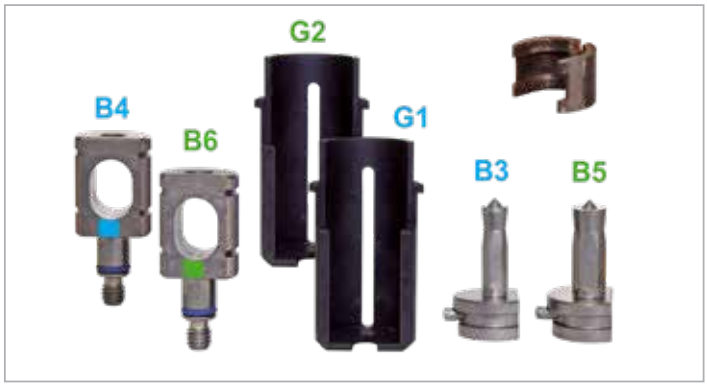

5.7.h

Screw die B4/B6 into the c-arm and tighten the die. Don't use force!


5.7.j

Complete assembly of „full punching" tool set.

5.7.1 Assembly of tool sets - hole punching and calibrating (Ø 6 and 8 mm) of new steel combinations up to 3,6 mm



Tool sets for full punching of new steel combinations up to 3,6 mm.

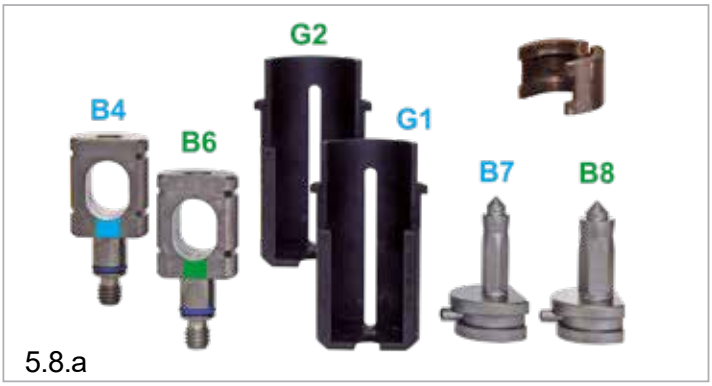
Tool Set B4 + G1 + B3 = **6 mm** rivet/punch hole
Tool Set B6 + G2 + B5 = **8 mm** rivet/punch hole

No blanking bits are used for these steel connections. The punch dies B3/B5 have an integrated cutting surface for the full punching process of these steel combinations.

5.8 Full punching process of steel combinations up to 8,6 mm

With the application of flow-form rivets it is not necessary to drill a hole into a steel connection. The punch dies B7 and B8, - in combination with die crowns, - ensure precise holes and calibration of rivet holes for flow-form rivets (FFR) at the same time..

Check the air pressure of the hydraulic actuator prior to each application!

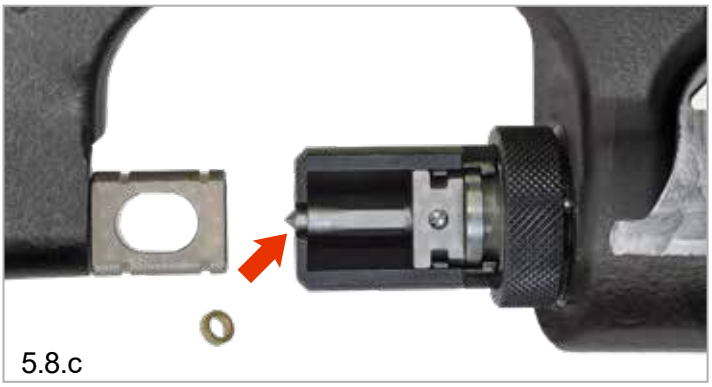


5.8.a

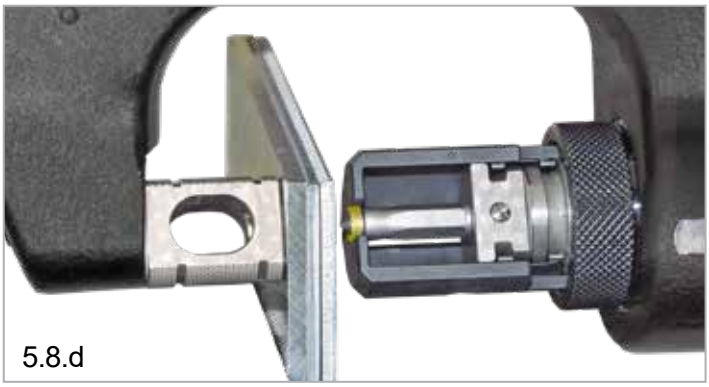
Tool sets for full blanking processes with die crowns

5.8.b

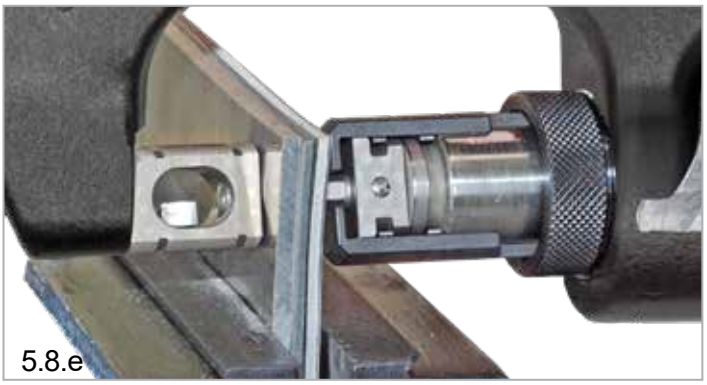
Blanking bits (SKR) for full hole blanking of 6 mm and 8 mm, can be used several times.


5.8.c

Put corresponding blanking bit (SKR) on punch die B7/B8.


5.8.d

Position PushPull tool on steel package.


5.8.e

Release PushPull button – steel package is hole punched and calibrated at the same time.


5.8.f

Rivet holes ready punched and calibrated. The punching crown (SKR) is reusable.

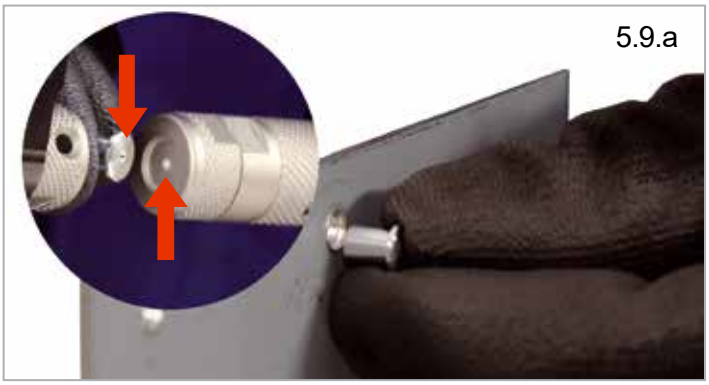
5.8.1 Full punching process with steel combinations up to 3,6 mm

The working process „full punching“ of new steel combinations up to 3,6 mm is described *in chapter 5.8* - **but without blanking bits.**

5.9 Setting flow-form-rivets

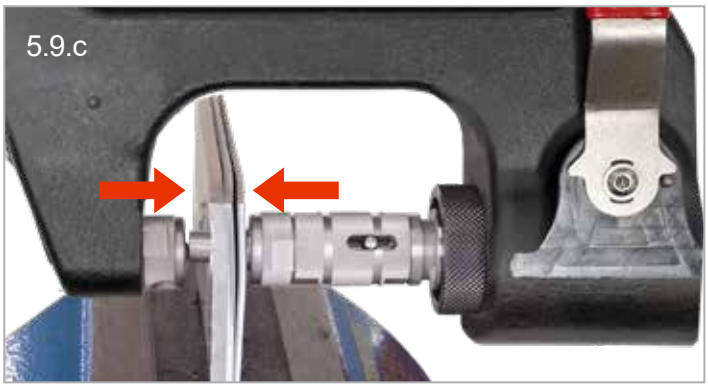
he flow form rivets are processed with the designated die heads.

See also chapter 5.2

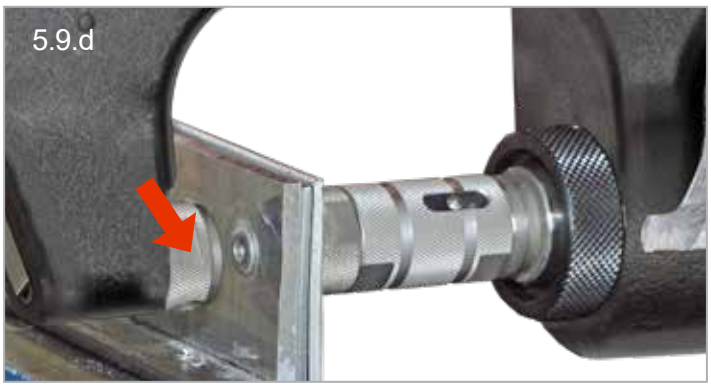


It is important that the die head with the centering lug engages in the corresponding depression in the rivet.

Select the manufacturer‘s specifications according to the rivet.



During the riveting operation, the die head is positioned on the rivet until the closing head compresses the rivet.



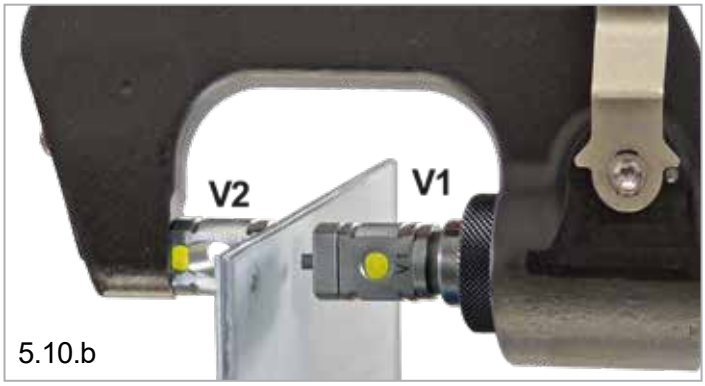
The closing head has a relief hole for adhesive residue. The hole must be blown clear after riveting; otherwise a successful riveting process can no longer be ensured.

5.10 Processing solid self-piercing-rivets

5.10.a

The setting die V1 (with magnetic insert) and the punching and closing die V2 can be used with solid self piercing rivets for sheet combination up to maximum 8 mm.

The hardness of the sheet combination should not exceed 250 HV (*Rockwell*).

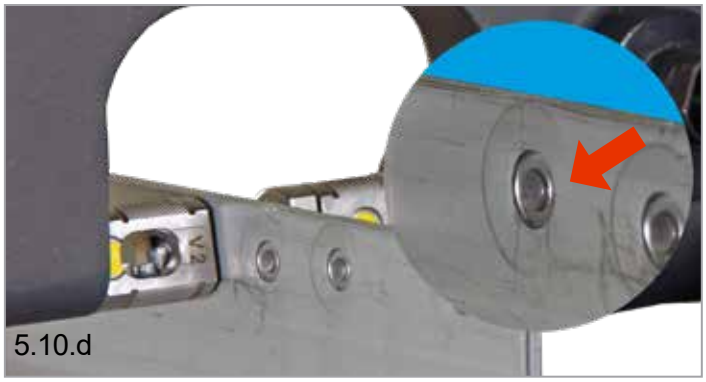


5.10.b

The assembling of **V1** setting die and **V2** solid self-piercing-rivet die is descriped (equal) in chapter 3.6.

5.10.c

Set the pressure control valve for this application according to the manufacturer‘s specifications. (Example image)


5.10.d

The solid self piercing rivet will punch through the complete sheet package. The pinch-off will be ejected by the die.

The die closing ring locks the rivet inside the sheet package. Almost no overhang is produced at the inside of the sheet package. (*lateral contraction*)

6

Before working with the blind rivet adapter BR20, please note

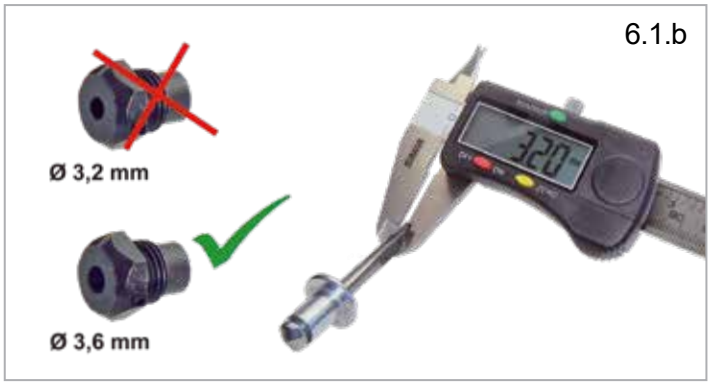
ATTENTION!
Only use blind rivet systems with a maximum shaft length of up to 40 mm.

6.1 Connecting the blind rivet adapter BR20

The device is connected as described in sections 3.7 + 3.8.

6.1.a

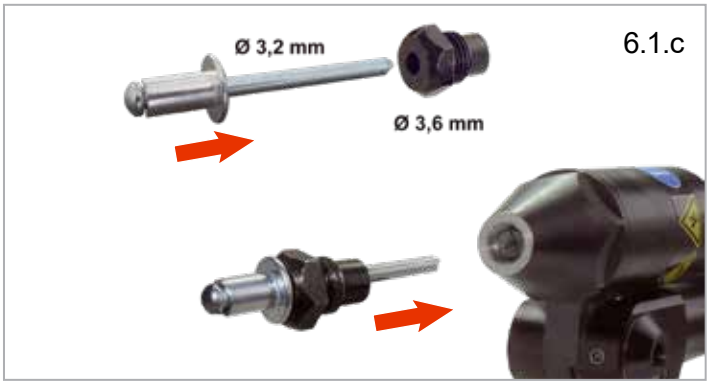
6.1.b



The BR20 can be used to process all blind rivet systems (except high-strength rivets) with a pull shaft Ø of 2 to 4.2 mm (max. shaft length up to 40 mm) and a maximum setting force of 28 kN. The corresponding mouthpieces for the adapter must be changed for the different pull shaft diameters.

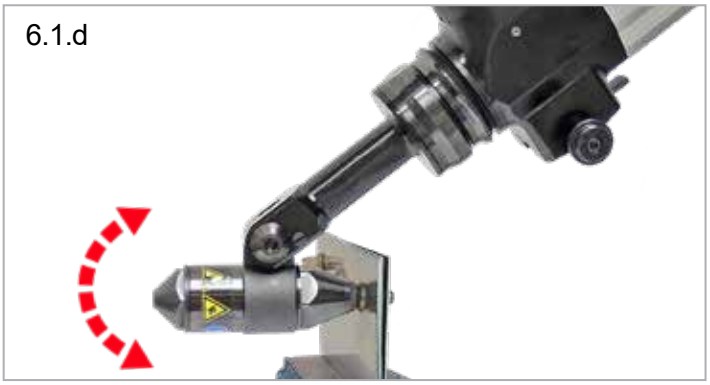
Always mount the mouthpiece with the next larger diameter on the BR 20 if the diameter of the pull shaft and mouthpiece are identical!
If in doubt, always first determine the pull shaft diameter of the blind rivet!

6.1.c



During initial assembly and changing the mouthpiece - always mount the mouthpiece together with the appropriate blind rivet on the BR 20. Remove blind rivet. Press the actuation button so that the gripping cone (chuck jaws) is positioned on the mouthpiece.

6.1.d



The rivet head of the BR20 blind rivet adapter can be swiveled through 120° and can be locked in 30° increments.

6.1.e

Press the locking button on the adapter until the head can be swiveled freely.

6.1.f

After releasing the button, swivel the adapter until the locking is active again at the next grid point.

6.2 Processing blind rivets with the blind rivet adapter BR20

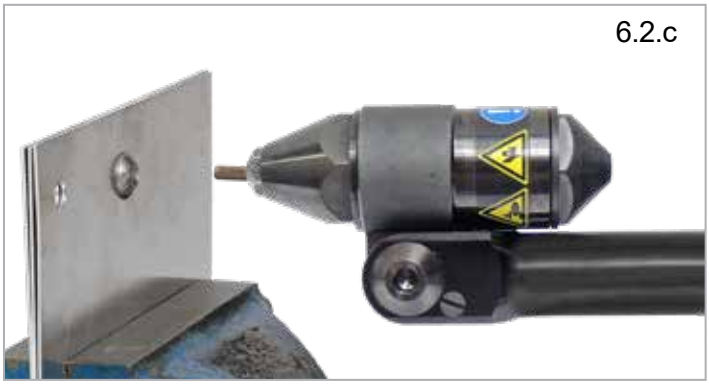
6.2.a

The BR20 has a single ejection for the torn-off drawstocks. When inserting the respective rivet, the ejector spring must be pressed in completely.

6.2.b

When the ***X****Press 1000 SC* Power Pack is operated, a piston pulls the rivet's pull shaft until the tear-off force is reached.

6.2.c



The locking head has formed and the torn pull shaft is released again by the ejector of the BR20 and can be removed.

7

Processing blind rivets with the BR50

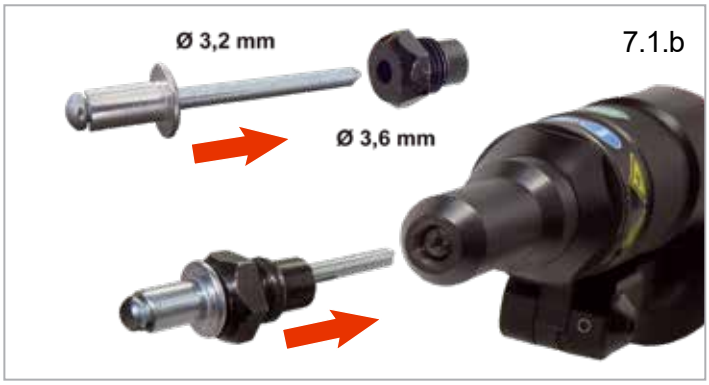
The BR50 is a blind rivet adapter with compact dimensions and a maximum setting force of 58 kN. The adapter has interchangeable pull-out jaws and a collection container for the broken pull-out shafts.

7.1 Connecting the BR50

The BR50 blind rivet adapter has the same quick coupling as all adapter systems for the ***X**Press SC* system.
The device is connected as described in sections 3.7 + 3.8.

7.1.a

The BR50 can be used to process all blind rivet systems with a pull-through shaft diameter of 2 to 5 mm and a max. setting force of 58 kN. The appropriate nozzles must be changed for the adapter for the different pull-through shaft diameters. Mounting the nozzle, Chapter 6.1



7.1.b

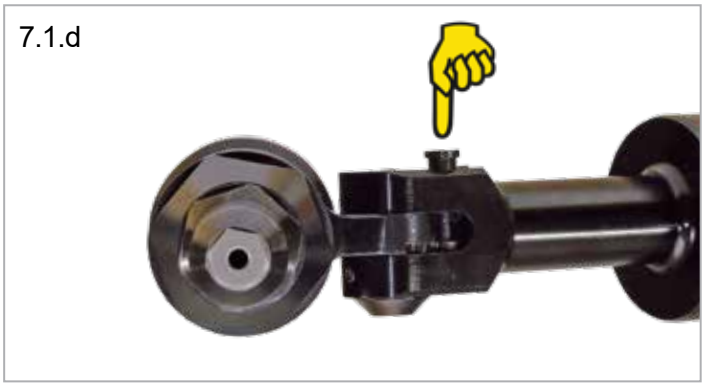
During initial assembly and when changing the nozzle, always mount the nozzle together with the appropriate blind rivet on the BR 50 so that the gripping cone is in the correct starting position.
Always use the next larger mouthpiece in diameter for the rivet.

The adapter has replaceable pull tabs and a collection container for the torn-off pull shanks.

- Ejection into the collection container.
- Ejection to the front, only for pull adapters for weld-on bolts.

7.1.c

7.1.d



The rivet head of the BR50 blind rivet adapter can be swivelled by 120° and locked in 30° increments.

Press the locking button on the adapter until the head can be swivelled freely.

7.1.e

After releasing the button, swivel the adapter until the lock is active again at the next grid point.

CAUTION! Only work when locked!

7.2 Working with rivets using the BR50

When using the BR50, the pressure setting of the compressed air regulator can be set to MAX: Power. However, the speed of the ***X****Press 1000 SC* Power Pack should be reduced to 50% so that the materials of the rivet heads have enough time to flow or deform.

7.2.a

7.2.b

7.2.c

The BR50 has a collection container for the torn-off pull shanks. When the ***X****Press 1000 SC* Power Pack is activated, a piston pulls the pull shank of the rivet until the break-off force is reached.

7.2.d

The closing head has formed and the torn-off pull shank is transported by the following rivet into the collection container.

8

Processing blind rivet nuts with BRN50

The BRN50 is a blind rivet nut adapter with compact dimensions and a maximum setting force of 58 kN. The BRN50 can be used to process all types of blind rivet nuts in sizes M4 to M12. The adapter offers a tensile force and an adjustable travel stop. Furthermore, single rivet bolts can be set with the BRN50. With a weld-on bolt, punch rivets can be pulled out of a sheet metal composite.

8.1 Connecting the BRN50

The BRN50 blind rivet nut adapter has the same quick coupling as all adapter systems for the ***X****Press SC* system.

The device is connected as described in sections 3.7 + 3.8.

The BRN50 can be used to process all types of blind rivet nuts in sizes M4 to M12. (Blind rivet screws are also available as an option) The adapter offers a tensile force and an adjustable travel stop. Furthermore, the BRN50 can be used to set rivet bolts. With a weld-on bolt, punch rivets can be pulled out of a sheet metal composite.

8.1.a

The BRN50 can be used to process all blind rivet systems with a pull-through diameter of 4 to 12 mm and a maximum setting force of 58 kN.

8.1.b

The appropriate pull-through adapters M4, M5, M6, M8, M10 and M12 must be changed for the different pull-through shaft diameters.
See chapter 8.2

The rivet head of the BRN50 blind rivet nut adapter can be swivelled through 120° and locked in 30° increments.

Press the locking button on the adapter until the head can be swivelled freely.

After releasing the button, swivel the adapter until the lock is active again at the next grid point.

CAUTION! Only work when locked!

8.2 Mounting the BRN50 pull adapter for blind rivet nuts

Do not use any tools when mounting the pull adapters. Tighten by hand only.

BRN50 + Pull adapter

Unscrew the pressure piece

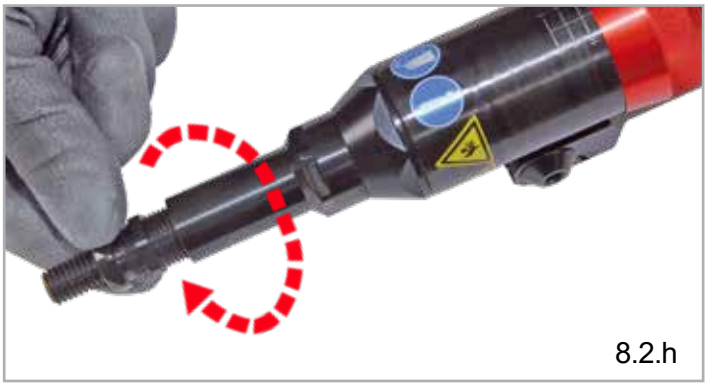
Also unscrew the hollow screw from the BRN50.

Hollow screw + Pull adapter + BRN50

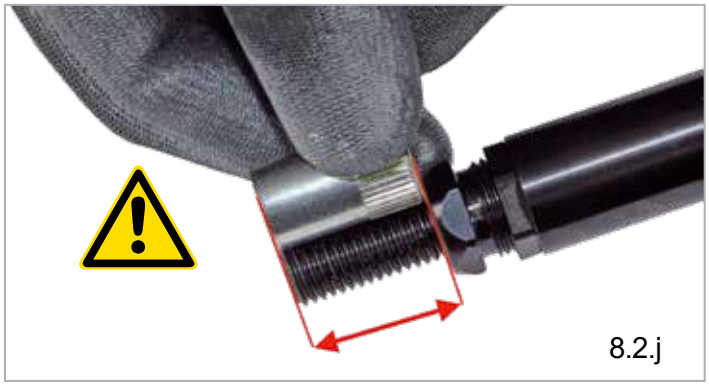
Mount the hollow screw + Pull adapter on the BRN50

Screw on the pull adapter

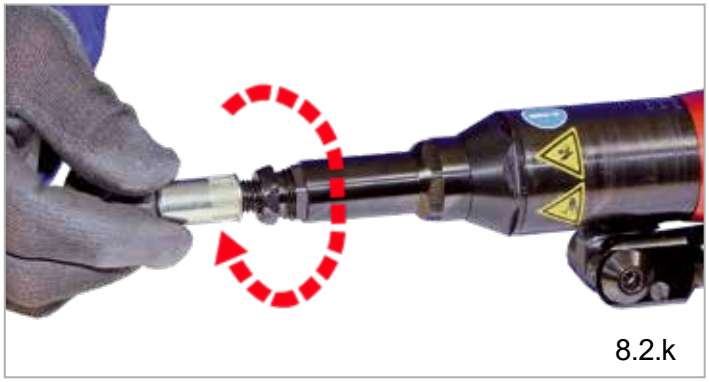
Tighten the pressure piece by hand



Also screw on the pressure screw with the lock nut.



The BRN50 has an adjustable stroke limiter for the different blind rivet nuts.

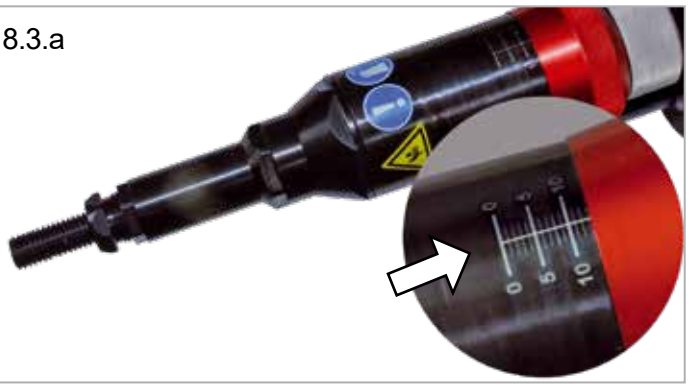


Unscrew the blind rivet nut

8.3 Working with blind rivet nuts using the BRN50

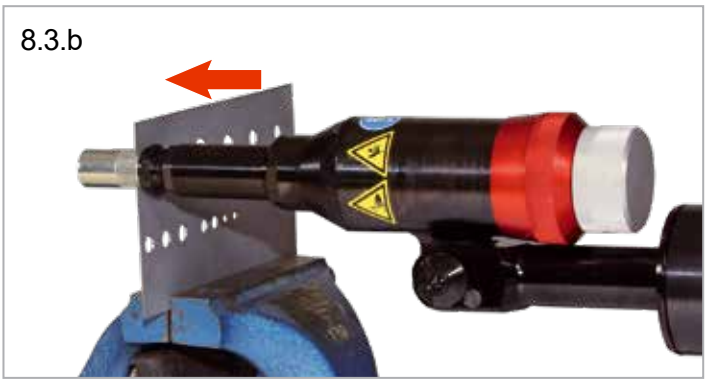
Guidelines for stroke adjustment on the BRN50 are provided in the instructions for RS-04 tool box.

8.3.a



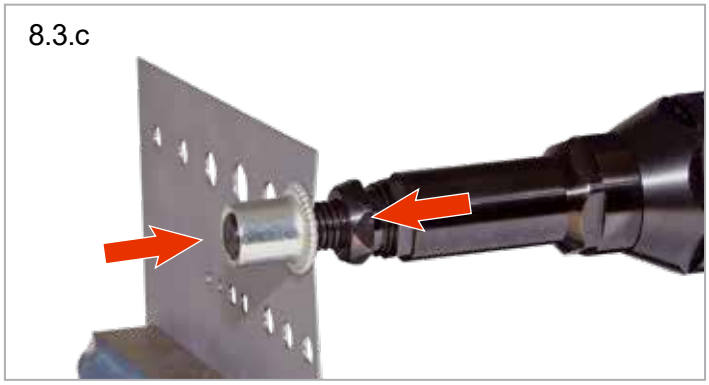
For all pull adapters, the maximum permissible stroke must be limited when the working pressure of the device is set to the highest level. If the stroke limitation is not set correctly, the pull bolts may break off due to the high tensile forces.

8.3.b



Insert blind rivet nut

8.3.c



Inserted blind rivet nut

8.3.d

Remove BRN50 from the blind rivet nut

9

Maintenance

⚠ CAUTION

The entire hydraulic system, including the quick-release couplings and the air supply lines, must be free of dirt.

Contamination in the hydraulic fluid and in the compressed air will cause the appliance to malfunction and can therefore also cause injuries.

The relevant adapter/tool instructions must be observed during servicing and maintenance work.

All maintenance and servicing work may only be carried out by trained specialist personnel or by the manufacturer.

If you have any queries regarding technical problems or maintenance requirements, please contact our service address:

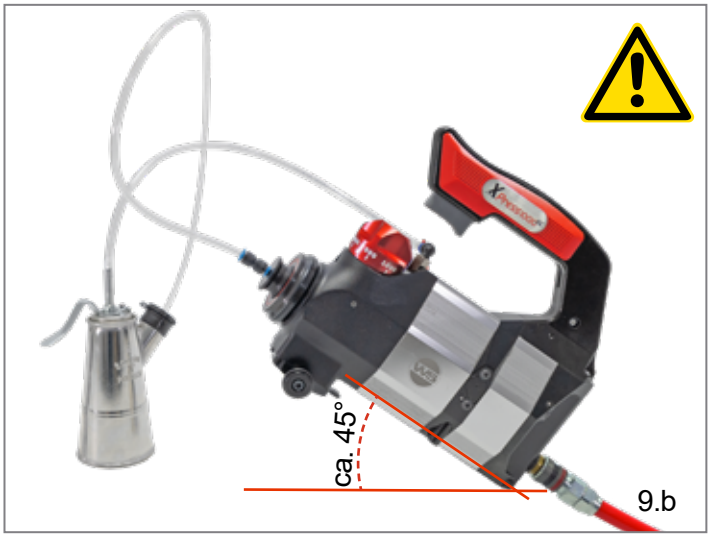
WS Wieländer+Schill
Professionelle Karosserie-Spezialwerkzeuge
Neue Wiesen 8
D-78609 Tuningen
Telefon: +49 (0)7464 / 9898-0
Telefax: +49 (0)7464 / 9898-289
E-Mail: info@wielanderschill.com

The device system is basically maintenance-free. It may be necessary to top up the oil due to normal use of the device or losses when disconnecting tools. Please observe the relevant oil specifications.
See chapter 2.1

9.a

Unscrew the sealing plug from the ***X**Press 1000 SC* Power Pack using a 5 mm Allen key.

Observe oil specification in section 2.1.



9.b

Connect the venting and filling device for the tool holder system of the ***X**Press 1000 SC*..
To vent the device, connect it to compressed air and place it at an angle of approx. 45°.
Pump the oil can until no more air bubbles are visible in the vent hose.
(Accessory item no. 700334)

10

Taking the appliance out of operation and storing it

10.a

Disconnect the short-stroke cylinder SSC 40/25. The disconnected adapter or the ***X**Press 1000 SC* Power Pack must never be contaminated with dirt, dust, chips or aggressive liquids.

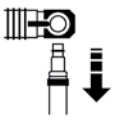
10.b

Close the coupling on the adapter with the protective cap.
Foreign bodies or impurities in the hydraulic system or on the couplings can lead to malfunctions in the system.

5.c 10.c

With compressed air connected:
After disconnecting the module, the operating button must be pressed once.
This closes the valve at the front.
CAUTION! Only trigger the 1st stage on the actuating button.

10.d



After the work process or during a work break, always disconnect the compressed air supply from the ***X**Press 1000 SC* Power Pack.

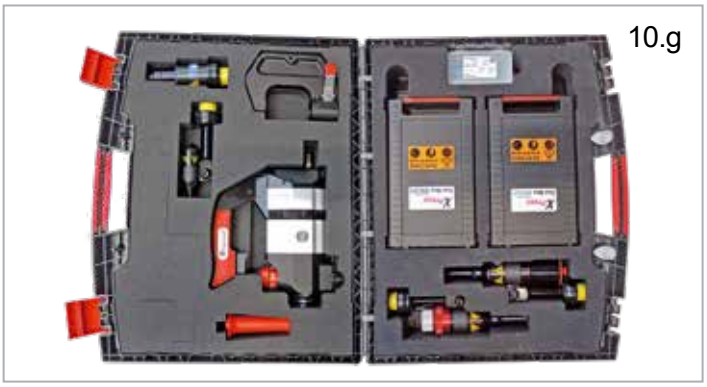
10.e

ATTENTION!
A minimal amount of residual oil on the quick-release couplings of the adapters is normal and does not mean a malfunction. Always remove any residual leakage from the coupling with a clean cleaning cloth.

10.f

Check the system for any major oil loss before and after each use. A loss of oil indicates a fault in the system. In this case, stop work and localise the fault or return the appliance to an authorised specialist dealer for repair.

The ***X**Press 1000 SC* PowerPack can now be put away without any oil leaking out.


10.g

Only ever store the tool in the transport case provided. Clean the tool system with clean cleaning cloths after each operation.

10.h

Maintaining the metal surfaces with anti-corrosion oil such as Caramba, Ballistol or WD40 protects the materials from corrosion.

10.1 Cleaning the riveting tools


10.1.a

After each completed riveting process, remove any adhesive residue from all contaminated rivet inserts and modules.

10.1.b

All affected tool components must be dismantled for this purpose. Clean them with acetone or other solvents.

⚠ CAUTION

Hardened adhesive residue on the riveting tool leads to malfunction. Affected riveting punches/ mandrels must be replaced with original spare parts before starting work.

10.2 Disposal

Parts of the appliance are recyclable materials and can be recycled. Authorised and certified recycling companies are available for this purpose. Please contact your local waste disposal authority for environmentally friendly disposal of non-recyclable parts.

11

Warranty

Please read our general terms and conditions of sale on our website
https://www.wielanderschill.com/Rechtliches/AGB/
https://www.wielanderschill.com/en/Shop-service/General-Terms-and-Conditions/

The tool was purchased from an authorised dealer and has been used exclusively for its intended purpose.

Please use the tool only in accordance with the operating instructions.

In the event of a defect or fault, you are entitled to repair, replacement or a reduction in price in accordance with the statutory warranty provisions.

Damage caused by improper repair, incorrect use or the use of non-original spare parts is excluded from the warranty.

Wear parts and wear parts of accessory components are excluded.

12

International service and repair partners

https://www.wielanderschill.com/service/vertretungen-weltweit/
https://www.wielanderschill.com/en/service/distributors-worldwide/

13

EU-Declaration of Conformity

EU-Declaration of Conformity

In accordance with the EU Machinery Directive 2006/42 EC

Manufacturer:	WS Wieländer+Schill GmbH & Co.KG Professionelle Karosserie-Spezialwerkzeug Neue Wiesen 8 D-78609 Tuningen
Type of device: Tool type:	Hand-held hydraulic tool Pneumatic-hydraulic Universal tool for heavy labour
Type designation:	***X****Press 1000 SC* has been developed and designed in accordance with the following standards and directives of
Applied harmonised standards:	Equipment Safety Act (GPSG) EN ISO 12100 EN ISO 4413:2010; EN ISO 4414:2010 EN ISO 16092-1 /-3:2018 EN ISO 11148-13:2018 EN ISO 11148-10:2011 EN ISO 11200:2014 + A1:2020 EN ISO 11202:2010 + A1:2021
EU Machinery Directive:	2006/42 EC
Authorised representative for the compilation of the relevant technical documentation	Manfred Bäurer *Managing Director*
We declare as manufacturer:	The products labelled accordingly fulfil the requirements of the listed directives and standards. Tuningen, 28.05.2025

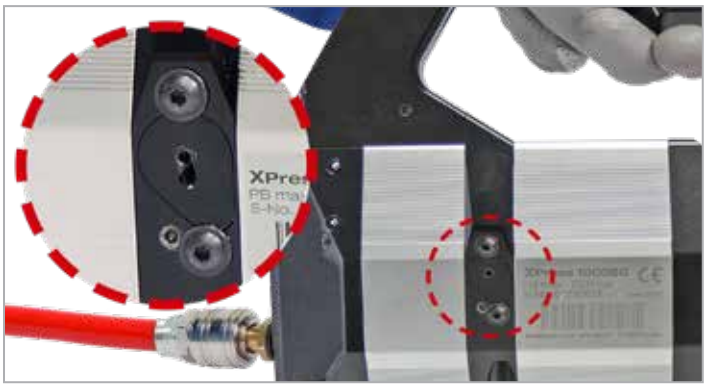
Manfred Bäurer
Managing Director

14

Troubleshooting

Pos.	Error	Troubleshooting
1.	Power adapter does not work properly or comes loose from the quick coupling	• Adapter is not correctly coupled. • Release lever is not folded backwards. • Chapter 3.3 + 3.4 / 3.7 + 3.8
2.	C-clamp does not engage on the short-stroke cylinder.	• Position and fit the C-bracket correctly. Chapter 3.5
3.	Riveting process is not carried out correctly.	• Remove adhesive residue from the punches and dies. If this is not possible or the rivet punches/mandrels are damaged, replace them. Caution: Only use original spare parts. • Check that the correct dies are inserted.
4.	Rivet is not set correctly	• Check the central air supply. The tool requires an air pressure of at least 8.0 bar. • Observe the specifications in the repair guide.
5.	Riveting process is not completed and the tool does not open after the rivet has been set. (Piston does not return to the home position)	• Disconnect compressed air from the tool. Fold the release lever forwards. The piston moves to the home position and the tool opens.
6.	• SC function is present but the machine does not build up pressure • The machine does not trigger • Rivet cannot be set	• Compressed air must be connected • Adapter must be connected to the Power Pack • Ventilation holes on both sides must be closed • Trigger the riveting process and repeat several times • CAUTION! Wear protective gloves at all times. Figures 14.a - 14.d
7.	Tool does not open after the pressing process. (Piston remains in the tool)	• Force setting: turn clockwise. Increase the pressure setting (bar) until the tool opens. To continue working, select the required pressure setting again.

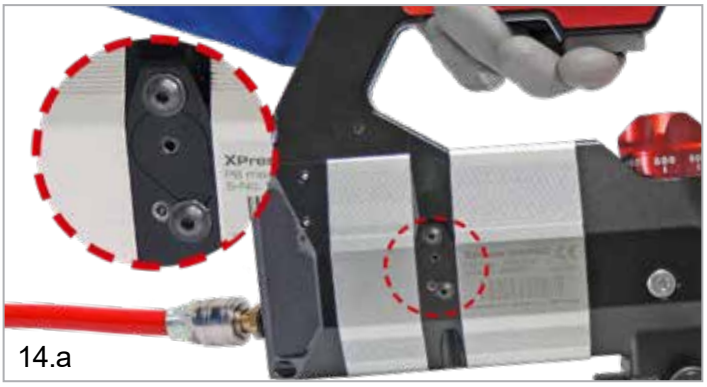
During operation, a light film of oil may naturally appear on the ventilation openings and above the quick coupling.



Pos. 6 Troubleshooting

WARNING

Wear protective gloves.



14.a

14.b

Close the ventilation openings on both sides and trigger the riveting process. Repeat.

14.c

14.d

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