Gechter GmbH Werkzeug- und Maschinenbau

Translation of the original operating manual

English

Hand toggle presses HKPE, HKPV and HKP

Type:
2,5 HKPE; 2,5 HKPV
5 HKPE; 5 HKPV
8/12 HKPV; 8/16 HKPV; 50 HKP

Representation of HKPV

The operating manual must be read prior to the initial commissioning!
Observe the safety instructions!
Keep for future use!

This documentation is not subject to any change service!

January – 2016 **Version: 00**
December- 2020 **Version: 01**

Information

i

This operating manual is part of the technical documentation of the press according to the EC press guideline.

This operating manual complies with the "Directive 2006/42/EC of the European Parliament and the Council on the Approximation of the Legal and Administrative Provisions of the Member States Relating to Presses" (Press Directive), appendix I, point 1.7.4.

CE

This operating manual is aimed at those responsible in the plant who must hand this over to the personnel responsible for the installation, connection, use and maintenance of the press.

The responsible persons must ensure that the information contained in the operating manual and in the accompanying documents has been read and understood.

The operating manual must be stored in a known and easy-to-access location and must also be consulted even in cases of minor doubt.

The manufacturer assumes no liability for damage to people, animals or objects as well as the press itself, which is caused from improper use, neglect or insufficient observance of the safety criteria contained in this operating manual or that is caused by modifying the press or using unsuitable spare parts.

Archiving

- Always store the operating manual on the press!
- Always keep the manual handy!

Symbols and Signal Words

The following symbols and signal words are used in this documentation. The combination of a pictogram and a signal word classifies the respective safety note. The symbol may vary depending on the type of hazard.

ANSI Z535.6	
	DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.
	WARNING indicates a hazardous situation which, if not avoided, could relust in death or serious injury.
	CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
	NOTICE is used to address practices not related to physical injury.
	Safety instructions (or equivalent) signs indicate specific safety-related instructions or procedures.

Content

I

1. Identification

Hand toggle presses HKPE, HKPV and HKP

Type: 2.5 HKPE; 2,5 HKPV; 5 HKPE; 5 HKPV; 8/12 HKPV; 8/16 HKPV; 50HKP

Expected service life: 10 years

Gechter GmbH Werkzeug- und Maschinenbau
Ostring 3
90587 Obermichelbach

GERMANY

Tele-phone: 0911 / 982873-20
Fax: 0911 / 982873-99
E-mail: verkauf@gechter.com

1.1 Use in accordance with the intended purpose

The hand toggle press may only be used for pressing, joining, assembly, riveting, punching, bending, embossing and cutting work as well as work with sufficiently insulated heated tools.
The device is only suitable for processing metal, cardboard, plastic, rubber, leather and metal powder.

Any other or extended use of the press is considered as unintended and is thus incorrect. This may impair the safety and its protection. The company Gechter GmbH Gechter GmbH Werkzeug- und Maschinenbau is not liable for any damages resulting from this.

Proper use also includes:

- observing all instructions in the operating manual
- observing all safety instructions
- complying with the inspection and maintenance work

NOTICE	
Observe the "Technical data" in the chapter "Installation and Function". This describes the exact technical specifications for proper use.	

1.2 Reasonably Foreseeable Misapplication

Reasonably foreseeable misapplication, which may result in dangers to the user, third party or to the press, for all operating modes is constituted by:

- using the press contrary to the intended use
- feeding components whose shape deviates from the shape intended for the press
- operating the press outside of the physical application limits described in the "Commissioning / operation" chapter
- changes to the press as well as additions and conversions without prior consultation with the company Gechter GmbH Werkzeug- und Maschinenbau
- operating the press contrary to the provisions of the operating manual with respect to safety instructions, installation, operation, maintenance and repair, setup and faults

	⚠ WARNING	
	**Risk of injury from unauthorized changes** Dangers result from unauthorized changes to the press and from the use of spare parts from other manufacturers. Only original spare parts and wear parts from the manufacturer may be used. Do not perform any changes, additions or conversions without approval from the company Gechter GmbH Werkzeug- und Maschinenbau.	

2. General Information

2.1 Warranty and liability

In general, the "General terms and conditions of sale and delivery" of the company Gechter GmbH Werkzeug- und Maschinenbau shall apply. These are available to the operator at the latest upon contract conclusion.

Warranty and liability claims in the event of personal injury or property damage are excluded if they are due to one or more of the following reasons:

- improper use of the press
- improper assembly, commissioning, operation and maintenance
- operating the press with defective safety devices
- disregarding instructions in the operating manual
- unauthorized structural changes
- deficient maintenance, repair and service measures
- cases of disaster caused by foreign bodies or force majeure

2.2 Target group of the operating manual

Target Group

The operating manual is intended for the operator and personnel with the following areas of expertise:

Work area	Expertise
Installation, transport and storage	Technically trained personnel
Commissioning, operation and decommissioning	Trained personnel
Setup	Technically trained personnel
Service and maintenance	Technically trained personnel
Troubleshooting	Technically trained personnel

Definition according to DIN EN 60204-1:

Trained personnel:
A person who has been instructed and trained where necessary by an expert regarding the tasks to be transfered as well as the possible dangers in the event of improper behavior and who has been instructed on the necessary protective equipment and protective measures.

Technically trained personnel:
A person whose professional training, knowledge and experience as well as knowledge of relevant standards allows him/her to assess the assigned work and detect possible dangers.

Qualification of the operating personnel:

Work may only be carried out on the machine independently by people who

- have been instructed and trained on the system by expert or service personnel of Gechter GmbH Werkzeug- und Maschinenbau and who are therefore familiar with the technology
- are physically and mentally capable to do so

Outside of the Federal Republic of Germany, the applicable accident prevention regulations, safety provisions and youth employment protection laws of the respective country shall apply.

2.3 Objectives of the operating manual

This operating manual is intended as an aid and contains all necessary information that must be taken into consideration for the general safety, transport, installation, operation, maintenance and setup.

This operating manual with all of the safety instructions (as well as all additional documents of the modules from third party suppliers) must:

- be observed, read and understood by all people who work on the press (especially knowledge of the safety instructions)
- be freely accessible to everyone
- be consulted in cases of even the slightest doubt (safety)

Goals:

- Avoid accidents
- Increase the service life and reliability of the press
- Reduce production downtime costs

3. General Safety Instructions

3.1 Scope and Symbols

	⚠ WARNING	
	**Danger to life, risk of injury and cause of physical damage** Failure to observe the operating manual and all of the safety instructions contained therein may result in dangers. Carefully read the operating manual prior to the initial commissioning. Meet the required safety conditions prior to the initial commissioning. General safety instructions and also the special safety instructions inserted in other chapters are to be observed.	

The machine is built in keeping with the latest technological developments and according to the recognized technical safety rules. In order to exclude dangers to the life and limb of the user, third parties or other damage during its use, only use the press for the intended use and in the clearly technically safe and perfect condition.

Property damage and physical injuries that are due to the instructions in the operating manual being ignored are the responsibility of the press operator of the persons commissioned by said operator.
Faults that may impair the safety must be rectified immediately.
All safety and hazard information about the press is to be observed and constantly kept in a good legible condition.

3.1.1 Safety symbols – pursuant to DIN 4844-2

	⚠ WARNING	
	**Risk of injury from ignoring the safety symbols** Dangers arise from ignoring the warning information about the press and in the operating manual. Observe the warning information in the "Appendix" chapter.	

3.2 Obligations

⚠ WARNING

Risk of death from negligence

Despite numerous protection and safety devices, there are still hazards in the event of negligent behavior when using the press.

Always work on the press with great care and caution. Failure to observe the safety instructions will lead to the loss of any claims for compensation.

The following conditions may increase the hazard potential of the press:

- Failure of important functions of the press
- Failure of prescribed methods for maintenance and repair
- Hazard of personnel from mechanical or thermal effects

3.2.1 Operator responsibilities

A safe technical condition and safe use of the press is the prerequisite for safe operation. That is why the press operator is obligated to ensure that the following points are observed:

- Ensure that the press is only operated by trained and authorize personnel!
- Prohibit safety-impairing and dangerous working methods! If necessary, review the personnel's actions!
- Have personnel confirm they have understood the operating manual with their signature!
- Ensure that a copy of the entire operating manual is always handy and available at the press!
- Regularly check the complete and legible condition of the operating manual!
- Prescribe the wearing of appropriate personal protective equipment (PPE) for work with an increased risk of injury!
- Determine the responsibilities according to the different task areas (operation, maintenance)!
- Require the operating and maintenance personnel to report any occurring and recognizable safety defects to their superiors immediately!

3.2.2 Obligations of the operating personnel

⚠ WARNING

Risk of injury from an improper condition of the press

There are risks when working on the press that are caused by faults or malfunctions, including of the safety equipment during operation.

Check the proper overall condition of the press once per shift.

⚠ WARNING

Risk of injury when used by unauthorized personnel

There are hazards if unauthorized personnel intervene in the press.

The press may only be operated after briefing or training.

NOTICE

The operating personnel are required to personally behave so as to contribute to preventing work accidents and their consequences.

3.2.3 Setup

⚠ WARNING

Risk of crushing from the intervention of unauthorized persons

There are hazards if retrofitting work is carried out by unauthorized personnel.

NOTICE

Unauthorized modifications and changes to the press are prohibited!

Only parts approved by the manufacturer may be used!

3.2.4 Service and maintenance

	**⚠ WARNING** **Risk of injury from mechanical energy** There are risks from mechanical energy as well as specific residual risks on the press. Only have maintenance and repair work carried out by unauthorized instructed personnel.	

	NOTICE Unauthorized modifications and changes to the press are prohibited! Only parts approved by the manufacturer may be used!	

3.2.5 Residual dangers

There can be residual risks that are not apparent despite all precautions taken! Residual risks can be reduced if the safety instructions and the intended use as well as the operating manual are observed in their entirety!

	**⚠ WARNING** **Risk of crushing and hand injury** There is a risk of injury from the movement of press components. During the pressing operation, it is strictly forbidden to reach into the working areas of the press. Observe the risk of crushing and hand injury during cleaning, setup, maintenance and fault rectification.	

3.3 Additional Information

For all work on the press, the accident prevention provisions of professional associations also apply.

Also to be noted:

- applicable binding regulations for accident prevention
- applicable binding regulations at the site of use
- the recognized technical rules for safety and professional work
- existing regulations for environmental protection
- other applicable regulations

	NOTICE	
	Employee training with respect to hazards and the required protective measures must be repeated regularly, but at least once a year. Operating instructions are required in the interest of occupational safety, which the operator must create! In addition to the operating manual, these instructions are to be fully observed by the press operator!	

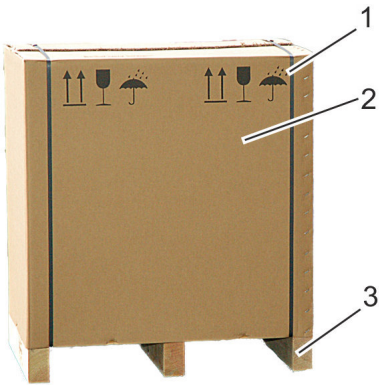
4. Installation

	NOTICE	
	Observe the basic safety instructions in the "Safety Instructions" chapter. In addition, observe all safety instructions in the manufacturer documentation found in the appendix.	

- Visually inspect that all sling gear is undamaged and in good condition!
- Screw in the full length of hooks and eye bolts!
- Check the delivered parts for completeness, damage or other abnormalities!
- During transport, observe the valid safety and accident prevention regulations (BGV D8, D6)!
- If you have questions about transport, setup and installation of the press, contact the company Gechter GmbH tool making and mechanical engineering!
- Refer to the "Identification" chapter for contact options!

4.1 Transport process

The press is delivered on a pallet. This must remain under the press during transport to the site of installation in order to avoid any tipping or bumping during transport.



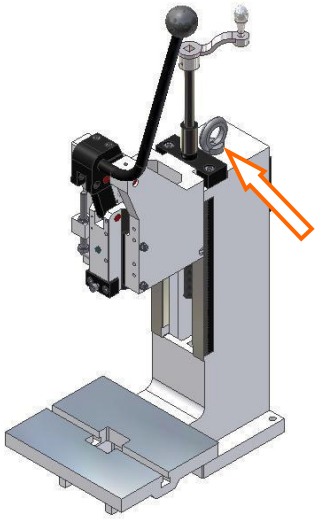
Example representation

- Bring the transport crate to the final site of installation with suitable transport equipment (lift truck / forklift).
- Wear appropriate protective clothing during transport work!
- For transport, only use technically flawless and functional hoisting gear with sufficient load-bearing capacities!
- Lift the press at the marked attachment points (3)!
- Ensure that the load-bearing capacity of the hoisting gear as well as the load receiving and transport equipment correspond to the loads specified for the press!
- For larger presses, have trained transport personnel carry out the transport!
- Remove the transport straps (1).
- Remove the pallet packaging (2).
- Remove the safety screws.

4.2 Setting up the system

	NOTICE	
	The press is delivered assembled and ready for operation. An assembly of accessories may be necessary in certain cases (observe the separate instructions for accessories).	

- Only lift the presses 8/16 and 50 HKP at the eye bolts provided!
- Always raise the other presses at the stand, never at the guide part or hand lever (damage to the guide possible)!
- When raising the press, balance the forward tilt by holding on to the press table.
- Unpack and grease the press



Example: Eye bolt for transport

4.2.1 Space required

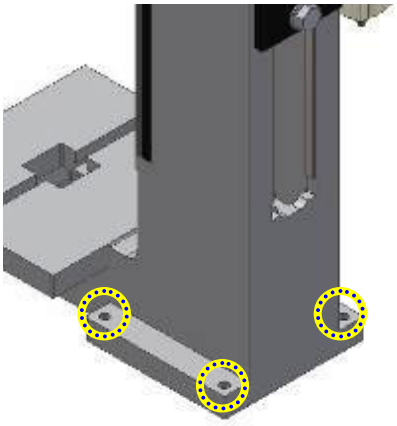
- Observe the exact specifications of the installation dimensions in the following schematic diagrams of the press (specifications in millimeters)!
- Observe the required load-bearing capacity of the workbench (see "Technical Data" chapter)!

The provided location must be firm and level!

4.2.2 Fastening the press

A stable workbench or the press underframe available as an accessory are suitable for the installation.

Fasten the press with hexagon bolts, washers and nuts through the bores on the press base feet.



Fastening the press

4.3 Operating Conditions

Physical operating conditions	
Ambient temperature:	± 0°C to +55°C
Air humidity:	30% to 60%
Elevation:	max. 2000 m above sea level
Contamination:	No high contamination from dust, acids, corrosive gases
Special conditions:	▪ No direct sunlight ▪ The operators must install additional lighting equipment if the working area is insufficiently lit ▪ Sufficient ventilation of the working area (load on the operator) ▪ The press does not have any explosion protection

4.3.1 Press lighting

NOTICE

The press does not have its own lighting equipment and is therefore to be integrated into to the hall lighting available at the site of installation!
The operators are to install additional lighting equipment if the lighting of the working area at the press is insufficient!

4.4 Aligning the system

You need the following tools to align the attached press elements:

- Spirit level

➲ Check the horizontal position with the spirit level!

Spirit level

4.5 Operating equipment

➲ Please refer to the documentation for supplier components in the appendix!

➲ When using cleaning agents, follow the operator's current work instructions!

➲ Refer to the "Lubrication" chapter for specifications about lubricating the press!

5. Setup and function

5.1 Description

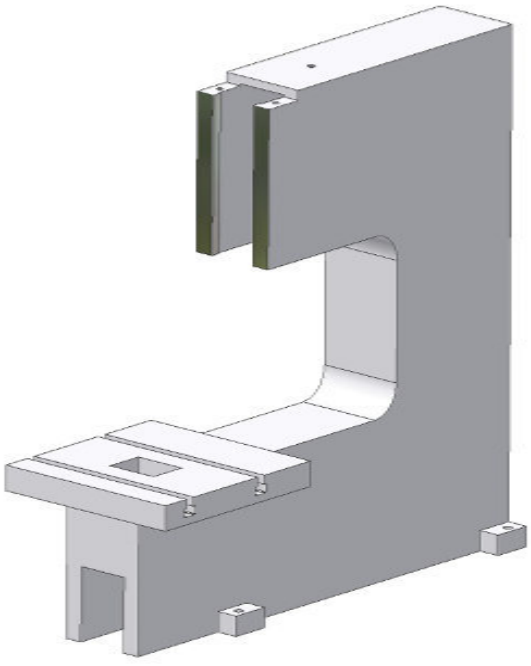
The hand toggle press is used for riveting, punching, bending, embossing, cutting, pressing and joining work. A constant work performance of the operator can be assumed due to the low physical force input.

The press is suitable as a work station both in a sitting and standing position. It is primarily fastened to an existing workbench or a sturdy base frame.

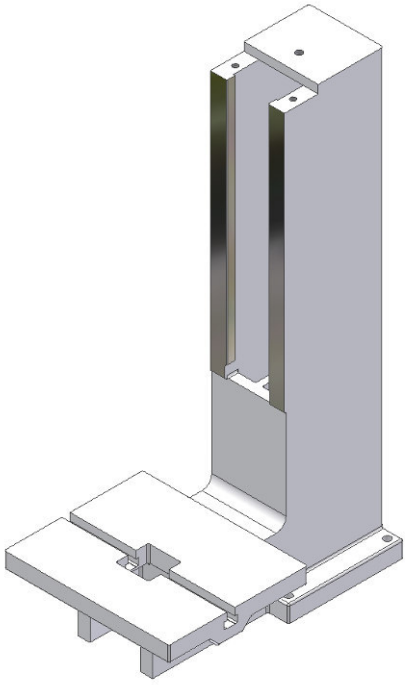
The hand toggle press may only be used for pressing, joining, assembly, riveting, punching, bending, embossing and cutting work as well as work with sufficiently insulated heated tools. The device is only suitable for processing metal, cardboard, plastic, rubber, leather and metal powder.

5.2 Standard versions

A modified stand version may be required in certain circumstances for the respective application case. The following other versions are available for the hand lever press with air assistance.



Stands with a greater overhang height

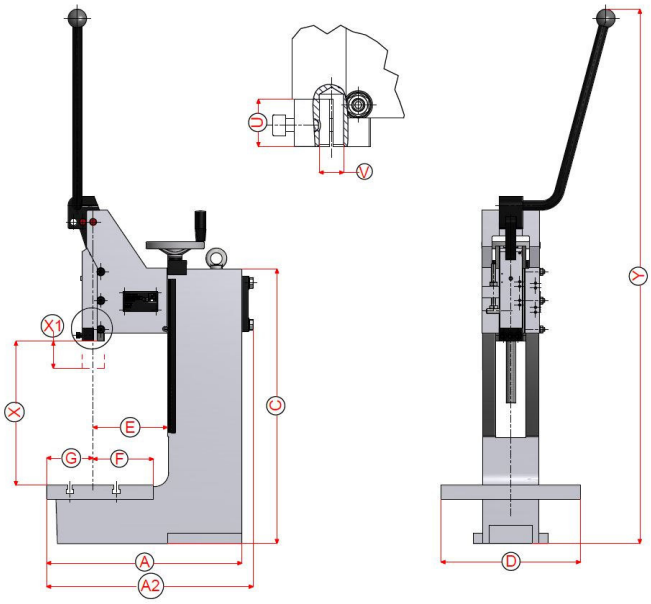


Stands with a larger installation

5.3 Technical Data

5.3.1 Technical data 2.5 HKPE; 2.5 HKPV

Dimensions and weights

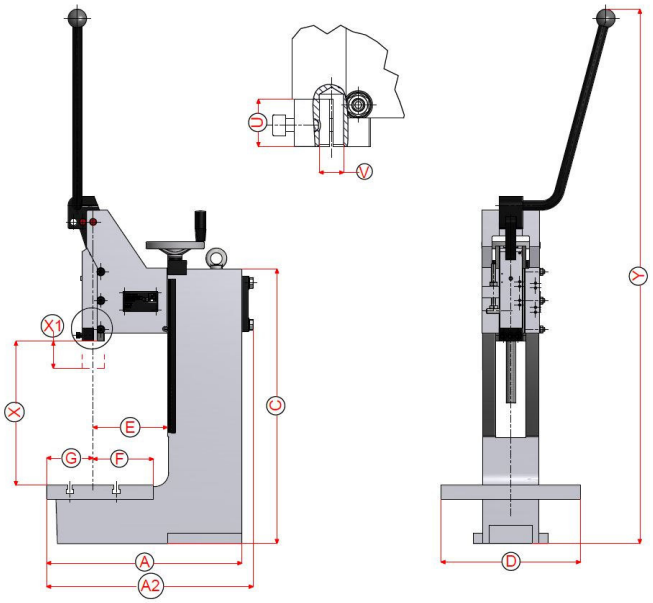


	2.5 HKPE	2.5 HKPV
	1	1
Force in the lower part with permissi-ble	max. **5 kN** max. 190 N	max. **8 kN** max 280 N
A	188	202
A2	200	220
C	320	320
D	150	150
E	70	90
F	55	60
G	39	40
U	25	25
V	ø 10H7	ø 10H7
X	75-190	75-190
X_1	0-32	0-42
413-510	413-510	480-600
Weight (kg)	7	11.5

1 Standard press

5.3.2 Technical data 5 HKPE; 5 HKPV

Dimensions and weights



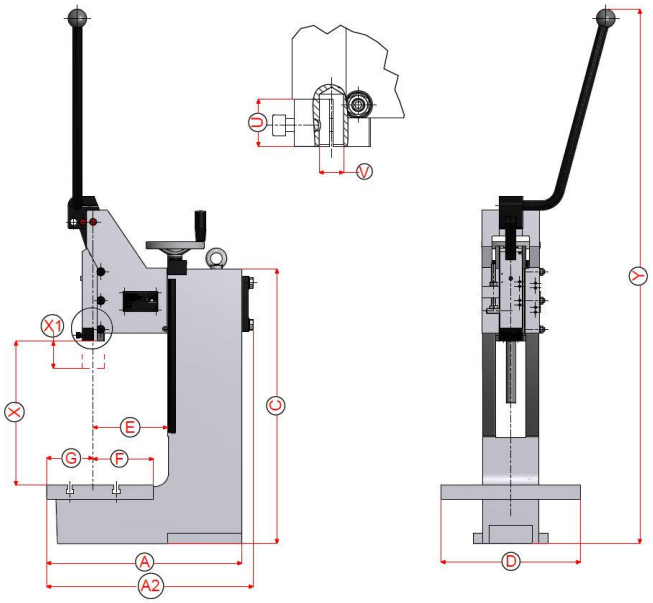
	5 HKPV		
	1	2	3
Force in the lower part with permissi-ble	max. 14kN max. 320N		
A	227	380	234
A2	243	396	243
C	344	360	444
D	180	200	180
E	90	200	90
F	60	120	60
G	50	70	50
U	21	21	21
V	ø 10H7	ø 10H7	ø 10H7
X	70-195	70-195	115-300
X_1	0-40	0-40	0-40
Y	595-715	610-758	695-815
Weight (kg)	20	30	27

1 Standard press **2** Enlarged overhang **3** Enlarged installation height

5.3.3 Technical data 8/12 HKPV; 8/16 HKPV

max. **16kN**
long stroke
max. 350N

Dimensions and weights

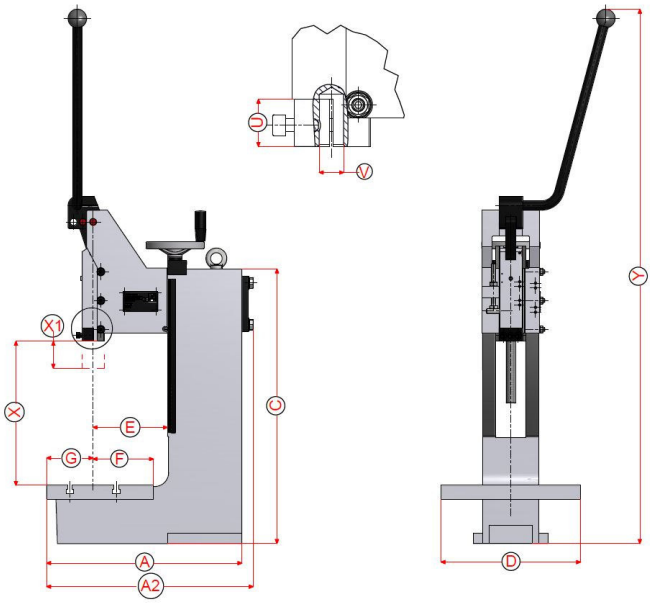


	8/12 HKPV			8/16 HKPV		
	1	**2**	**3**	**1**	**2**	**3**
Force in the lower part with permissible	max. **20kN** short stroke / max. **16kN** long stroke, max. 350N			max. **32kN** short stroke / max. **24kN** long stroke, max. 420N		
A	310	548	315	420	603	443
A2	328	566	328	445	628	468
C	415	507	515	590	670	690
D	200	200	200	300	300	300
E	120	300	120	160	300	160
F	92	120	92	130	130	130
G	76	85	75	100	100	100
U	21	21	21	29	29	29
V	ø 10H7	ø 10H7	ø 10H7	ø 15H7	ø 15H7	ø 15H7
X	75-240	180-235	110-335	100-320	220-320	150-420
X_1	0-23/45	0-23/45	0-23/45	0-25/58	0-25/58	0-25/58
Y	655-820	755-910	755-920	930-1150	1050-1230	1030-1250
Weight (kg)	32	74	43	79	133	85

1 Standard press **2** Enlarged overhang **3** Enlarged installation height

5.3.4 Technical data 50 HKP

Dimensions and weights



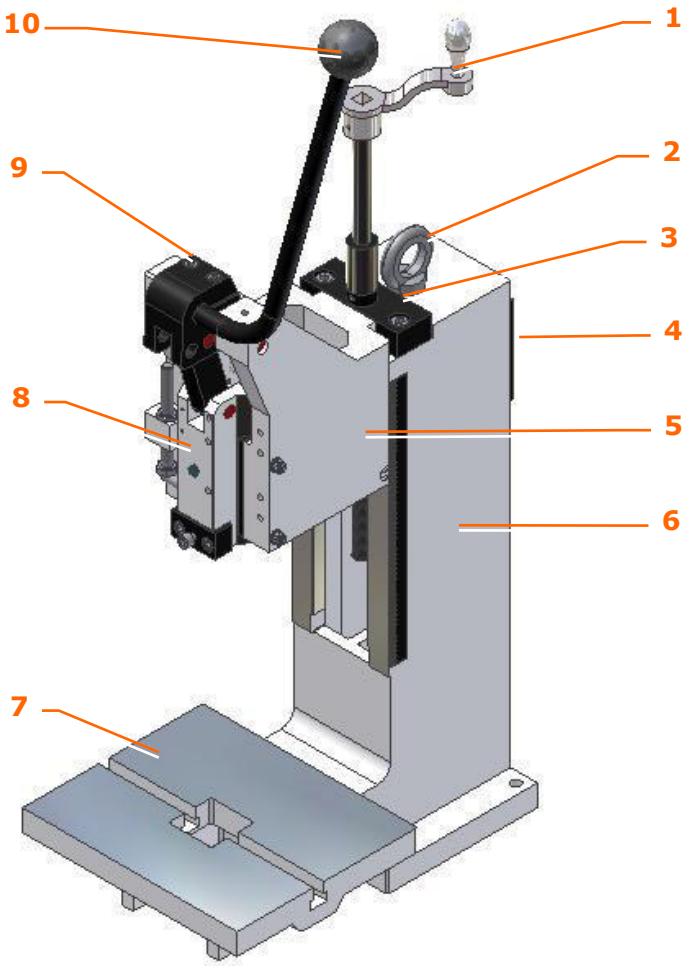
	50 HKP		
	1	2	3
Force in the lower part with permissible	max. 55kN max. 330N		
A	520	670	522
A2	565	715	567
C	715	769	815
D	340	340	350
E	200	300	200
F	150	150	150
G	120	120	120
U	49	49	49
V	Ø 25H7	Ø 25H7	Ø 25H7
X	110-370	230-370	110-470
X_1	0-15	0-15	0-15
Y	1250	1250	1350
Weight (kg)	242	306	254

1 Standard press **2** Enlarged overhang **3** Enlarged installation height

5.3.5 Nameplate

"Nameplate" example

5.4 Overall representation



1	Adjusting lever	**6**	Press stand
2	Eye bolt	**7**	Press table
3	Spindle clamping screw	**8**	Press sled
4	Clamping screws	**9**	Lever clamping
5	Guide part	**10**	Hand lever

	NOTICE	
	Not all components are available for all press types.	

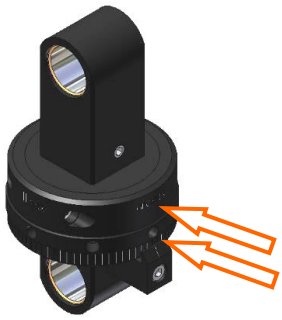
5.5 Accessories (optional)

NOTICE

The accessories are not available for all press types.
Installation manuals are available for the accessories.

5.5.1 Fine adjustment PFE

➲ Release both threaded pins to adjust the PFE



Releasing the threaded pins

➲ Adjust the PFE according to the scale.

➲ Tighten both threaded pins.

Scale

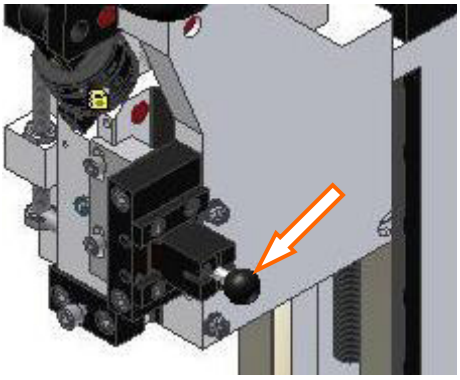
NOTICE

A dash on the scale corresponds to 0.025 mm

Travel distance max. 3 mm

5.5.2 Mechanical return stroke lock RHS

- Emergency unlocking: Pull out
- Disabling: Pull out and turn 90°



Mechanical return stroke lock

5.5.3 Precision depth adjustment PTE

- Loosen the threaded pin to adjust
- Adjust the depth according to the scale
- Tighten the threaded pin

Adjusting the PTE

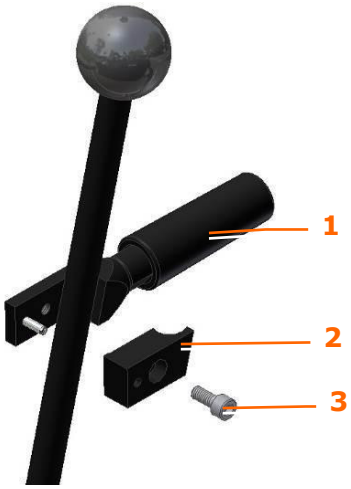
	NOTICE	
	The precision depth adjustment PTE can be adjusted by 3 mm. A dash on the scale corresponds to 0.025 mm.	

5.5.4 Ergonomic handle

	**⚠ WARNING** **Danger of injury from the hand lever jumping up!** Hold on to the hand lever tightly during the entire work cycle. Release the hand lever once this has reached the uppermost position.	

Carry out the following activities:

- Unscrew the Allen screw.
- Remove the clamped piece.
- Align the ergonomic handle.
- Screw on the clamped piece.



Ergonomic handle

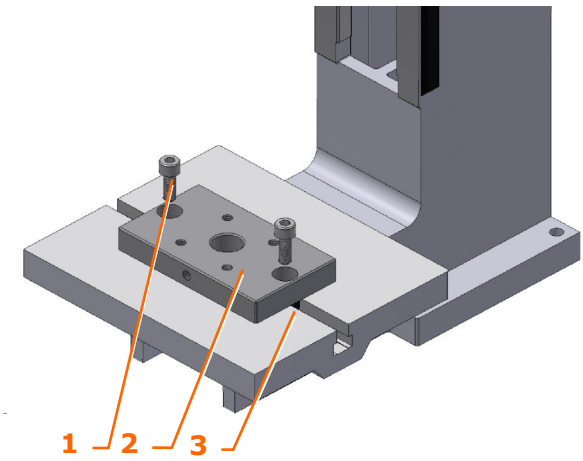
1	Ergonomic handle	**3**	Fastening screw
2	Clamping piece		

	NOTICE An installation manual is available for the ergonomic handle.	

5.5.5 Centering plate

Carry out the following activities:

- Slide the T-shaped sliding blocks into the T-groove guide.
- Place the centering plate on the press table.
- Affix the centering plate with the centering pin.
- Tighten the centering plate onto the press table with the fastening screws.



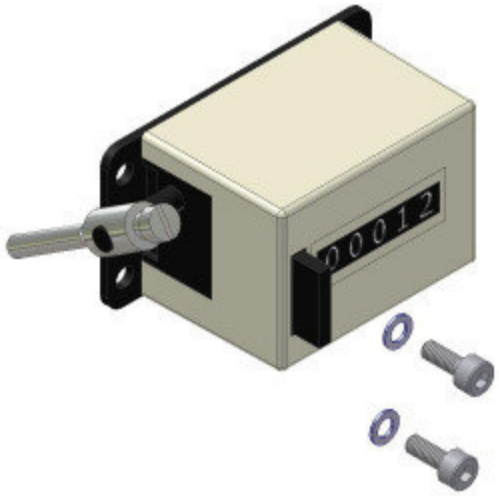
Centering plate

1 Fastening screw

2 Centering plate

3 T-shaped sliding blocks

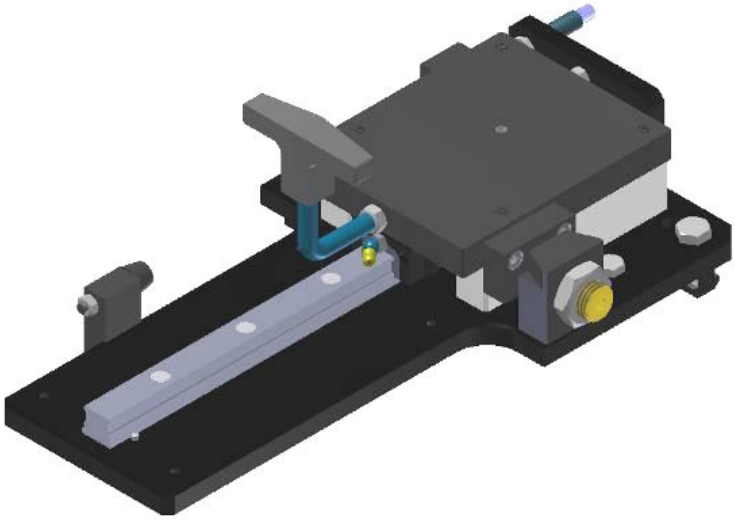
5.5.6 Mechanical stroke counter



	NOTICE	
	An installation manual is available for the mechanical stroke counter.	

5.5.7 Sliding tables

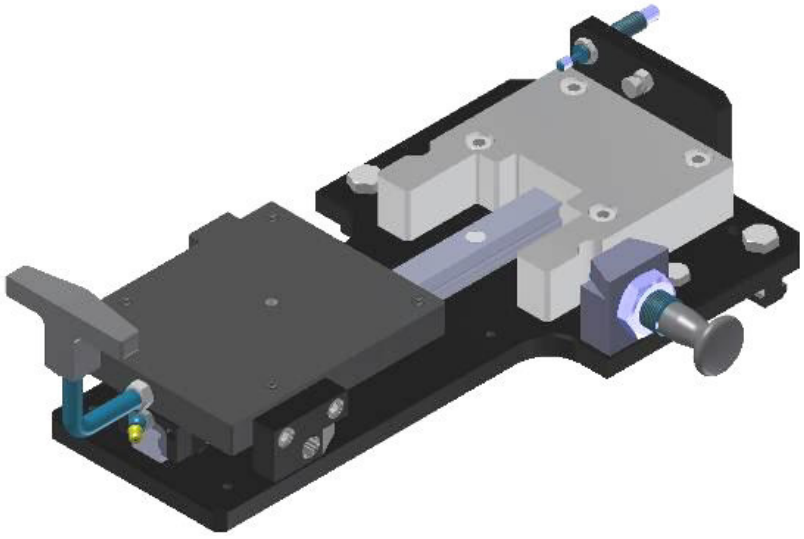
Heavy duty mechanical sliding table



Sliding table with the spring pressure piece in the press position

Heavy duty mechanical sliding table, with locking pin

	NOTICE	
	The sliding table with locking pin is used to absorb non-vertical forces.	



	NOTICE	
	Separate instructions are available for the sliding tables.	

6. Commissioning / Operation

NOTICE

Observe the safety chapter

The basic safety information for the press is located in the "Safety Information" chapter.

6.1 Commissioning

➲ Check the press and all associated mechanical components for damage!

⚠ WARNING

Risk of injury from damage and defects

Specify the responsibility of the commissioning personnel.
Before commissioning, check the press to ensure it has the correct setting and ensure the presence of the required protective and safety devices. If defects are identified, stop the press until these defects are rectified.

Immediately replace defective press components. Use the additional documents in the appendix of this operating manual to ensure an undoubted identification of the component.

6.1.1 Functional check before operation

⚠ WARNING

Risk of injury from damage and defects

There is a danger from damage and defects on the press.

Do not operate the press in the case of localized and identified damage. Replace defective components.

6.2 Operation

⚠ WARNING

Crushing and hand injuries

Ensure that no body parts enter into the tool area during operation!

⚠ WARNING

Risk of injury from material dust!

Dust that makes its way into the airways or eyes when processing metal powder or similar may lead to injuries.

Always use an exhaust system during powder processing.

Never work without a respirator mask during powder processing.

Never work without a protective goggles during powder processing.

6.2.1 Press process work steps

NOTICE

Due to the number of application possibilities of the hand toggle press, detailed work steps cannot be described. The respective work steps must be specified by the operator.

The following work steps describe a simplified pressing process in order to illustrate the general pressing process:

- Take the workpiece from the stock.
- Place the workpiece in the press tool.
- Execute the approach stroke of the upper die with the hand lever.
- Remove the workpiece from the pressing tool and place to the side.

7. Decommissioning

	NOTICE	
	Observe the safety chapter Observe the basic safety instructions in the "Safety Instructions" chapter. In addition, observe all safety instructions in the manufacturer documentation found in the appendix.	

7.1 Shutting down the press (longer period of time)

➲ Carry out the following storage measures if it is intended to decommission the press for longer than 4 weeks!

Empty:

- Remove parts

Storage:

- Cover the press to protect it from contaminants
- Slightly oil the bare metal parts to protect them from corrosion
- Store the press on transport pallets
- Fasten moving parts

7.2 Relocate the press

➲ Carry out the following work steps if the press is to be relocated!

Empty:

- Remove parts

Relocate:

- Cover the press to protect it from contaminants
- Slightly oil the bare metal parts to protect them from corrosion
- Store the press on transport pallets
- Fasten moving parts

IMPORTANT

Observe the transport information in the "Transport process" chapter!

7.3 Storing the system

The storage facility must be cool and dry in order not to favor corrosion of individual parts of the system.
The room temperature of the storage facility must constantly be between 10°C and 25°C. The humidity of the storage room may not exceed 50%.

- Pack the press parts so that they are not damaged by external influences during storage!
- If necessary, use cardboard and other packaging material!
- Secure the press parts from accidental tipping over and instability!

7.4 Disposing of the press

- Dispose of the packaging material according to the local regulations!

Dispose of cardboard, protective packaging made of plastic and preservatives separately and properly!

The disposal of the press (also press parts, operating materials) depends on the local disposal regulations as well as the environmental protection laws in the country of application.

If the press has reached the end of its life cycle, a safe and proper disposal is to be ensured during its disassembly, especially when it comes to parts or substances that are harmful to the environment. This includes, for example, lubricants, plastics and batteries.

- Have the press disposed of by an approved professional company due to the risk of possible environmental pollution!

8. Setup and accessories

NOTICE

Observe the safety chapter
Observe the basic safety instructions in the "Safety Instructions" chapter.

In addition, observe all safety instructions in the manufacturer documentation found in the appendix.

8.1 Setup process

⚠ WARNING

Risk of crushing and hand injury

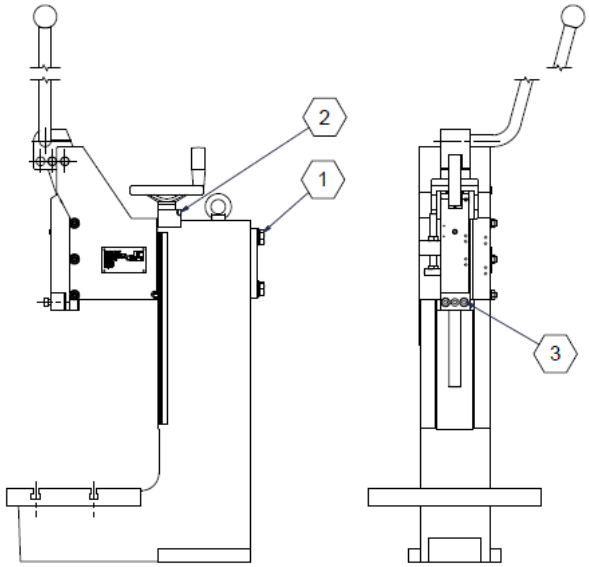
Have setup work only carried out by professionals.

Before operating the hand lever, ensure that the tool area is clear.

Do not hold your hand in the tool area during a test stroke.

8.1.1 Tightening torques for screws

The screw connections are to be tightened with the corresponding tightening torque to ensure a secure hold of the assemblies.

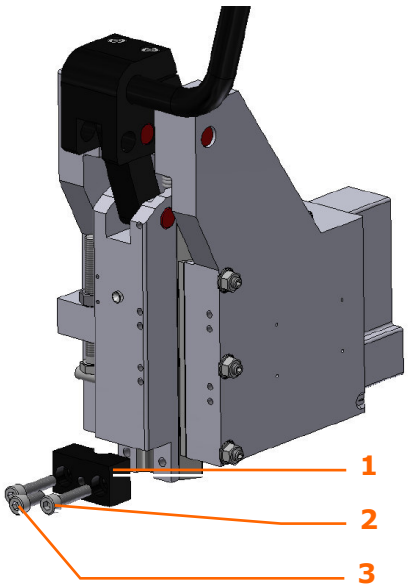


Tightening torques									
	HKPE / HKPV 2.5			HKPE / HKPV 5			HKPV 8/12		
	1	2	3	1	2	3	1	2	3
Torque (Nm)	70	6.5	11	70	6.5	11	90	6.5	11

	HKPV 8/16			HKP 50		
	1	2	3	1	2	3
Torque (Nm)	120	6.5	25	170	6.5	25

8.1.2 Remove the clamped piece (from 5 HKPV)

- Unscrew the pin retaining screw in the clamping piece with an Allen key.
- Unscrew the tensioning screws with an Allen key.
- Remove the clamping piece forward.



Remove the clamping piece

1	Clamping piece	**3**	Pin retaining screw
2	Clamping screw		

	NOTICE	
	Observe the installation position (marking) so that the clamping piece can be reinstalled without contorting it.	

8.1.3 Clamping the tool

By default, the following dimensions must be observed for the tool:

Measured variable	Dimensions (mm)						
	2.5 HKPE	2.5 HKPV	5 HKPE	5 HKPV	8/12 HKPV	8/16 HKPV	50 HKP
Length of the clamping pin, max.	21	25	21	21	21	29	45
Clamping bore, ø	10^{H7}	10^{H7}	10^{H7}	10^{H7}	10^{H7}	15^{H7}	25^{H7}

⚠ WARNING

The dimensions of the tool may not be greater than those of the press table. If the tool protrudes beyond the press table, particular care should be taken.

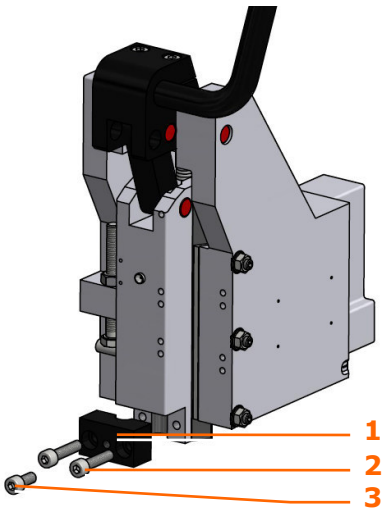
8.1.4 Setup

NOTICE

Observe the installation position (marking) so that the clamping piece can be reinstalled without contorting it.

The following activities are carried out:

- Insert the clamping pins of the tool or stamp/upper die by pressing the bottom side of the slide into the half shell of the clamping bore.
- Insert the clamping piece and retighten both tensioning screws.
- Screw the pin retaining screw all the way into the clamping piece with an Allen key. The pin retaining screw now presses on the cone and pulls the upper die all the way up against the half shell of the clamping bore.



Clamp the tool

1 Clamping piece
2 Clamping screw
3 Pin retaining screw

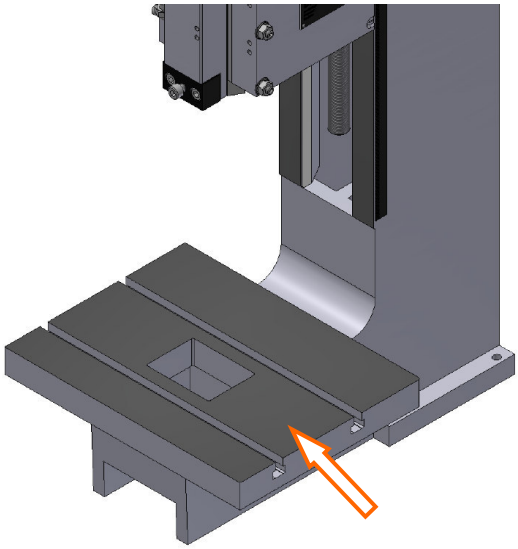
NOTICE

The upper die must be clamped first and then the lower die in order to avoid the tool from being miscut and deformed.

The clamping pivot of the upper die may not rest on the base of the receiving bore in the sled, as otherwise the clamping pin of the tool can become jammed in the receiving bore when working with the press.

	NOTICE	
	T-shaped sliding blocks are available to clamp the lower die. For 2.5 - 8/12 HKPV 1x DIN 650, M8x10 middle symmetrical. For 8/16 HKPV 2x DIN 650, M8x10 middle symmetrical. For 50 HKP 2x DIN 650, M8x12 middle symmetrical.	

➲ Fasten the tool to the press table.



Press table

8.1.5 Adjust the height

⚠ WARNING

Risk of crushing and hand injury from dropping guide unit

Never unscrew the clamping screws of the guide unit.

NOTICE

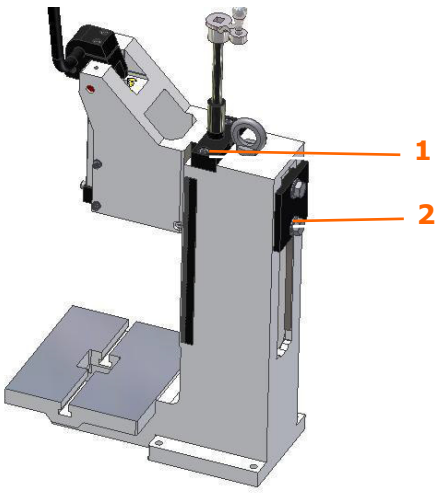
A clamped tool is a prerequisite for adjusting the height.

A scale is attached to the stand that displays the height of the guide unit via a marking.

Carry out the following activities:

- Loosen the clamping screws of the guide unit clamp with a ring wrench, but do not unscrew it all the way.
- Loosen the clamping screw at the threaded spindle (from 5 HKPV) with a 4 mm hex wrench, but do not unscrew it all the way.
- Depending on the press type, adjust the guide unit up or down to the desired height by hand, via the hand crank or via the hand wheel or the ratchet.

- Tighten the clamping screws of the guide unit to the specified tightening torque.
- Remove the thread play by turning the threaded spindle counter-clockwise.
- Secure the threaded spindle from twisting with the clamping screw.



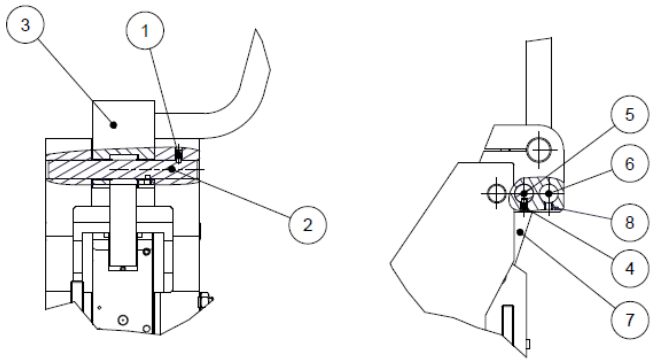
1 Clamping screw of the threaded spindle

2 Clamping screw of the guide unit

8.1.6 Adjusting the stroke length and pressing force (only for type 8/12 and 8/16)

Carry out the following activities:

- Unscrew the threaded pin (1).
- Move the main pin (2) to the side.
- Unfold the fork piece (3) forward together with the hand lever.
- Unscrew the threaded pin (4).
- Reinsert the adjusting pin (5) with the strap (7) into the bore (6).
- Screw the threaded pin (4) into the threaded bore (8) and secure the adjusting screw (6).
- Reinstall the fork piece in the reverse order.

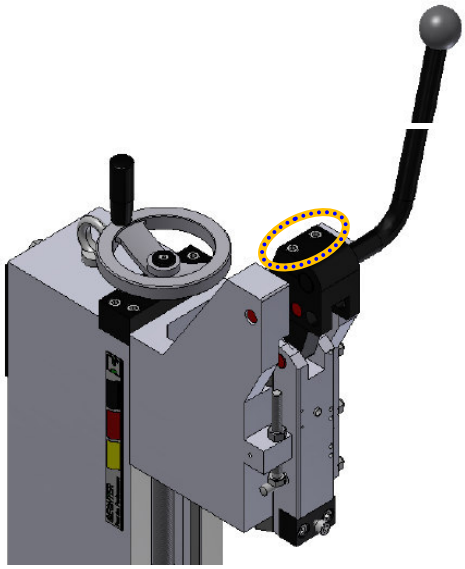


1	Threaded pin	**5**	Adjusting pin and pin bore for the long stroke
2	Main pin	**6**	Short stroke pin bore
3	Fork piece	**7**	Strap
4	Threaded pin	**8**	Threaded pin

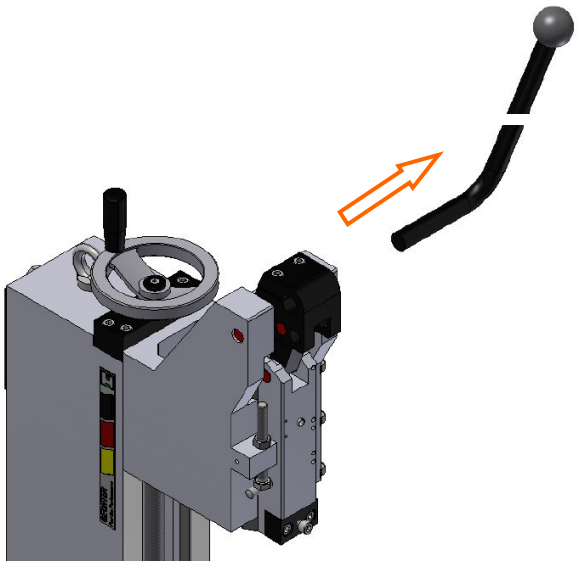
8.1.7 Changing the hand lever from right to left

Carry out the following activities:

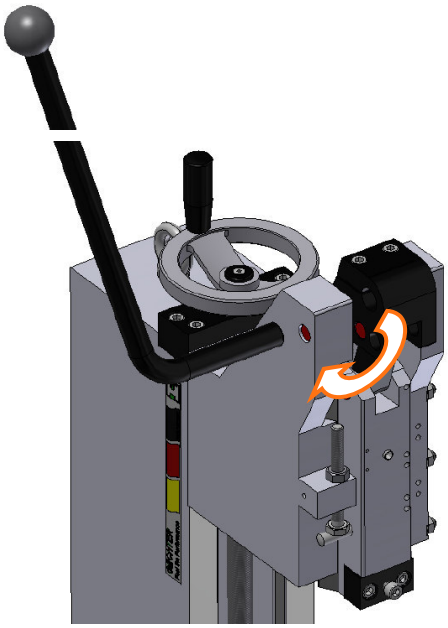
➲ Loosen the cylinder head screws



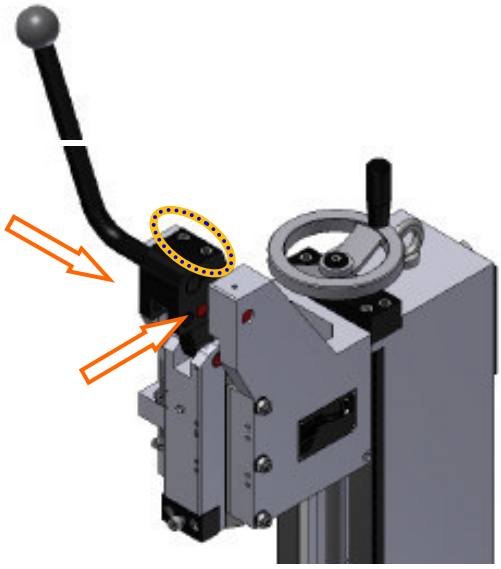
➲ Pull the lever out



➲ Pivot the lever to the left side



➲ Push in the lever flush and tighten the cylinder head screws



9. Service and maintenance

9.1 Maintenance safety

NOTICE

Observe the safety chapter!

Observe the basic safety instructions in the "Safety Instructions" chapter.

In addition, observe all safety instructions in the manufacturer documentation found in the appendix.

⚠ WARNING

Risk of injury from improperly executed maintenance work!

Maintenance work may only be performed by technically trained personnel.

⚠ WARNING

Risk of crushing your hand and fingers!

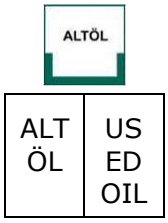
Ensure the tool area is clear before actuating the hand lever!

Do not hold your hand in the tool area during a test stroke.

- Observe the general accident prevention regulations and VDE guidelines!
- Carry out the prescribe adjustment, maintenance and repair work on schedule!
- Replace defective system parts as quickly as possible!
- Inform the operating and supervisory personnel before starting maintenance and repair work!
- Attach an information sign!

Maintenance tasks can also be carried out by the press operator if said operator has received training or instruction for this purpose.
In the process, it must be stated in writing what interventions the press operator may perform and for which interventions the press operator must inform the appointed specialist.

- Only use tools in perfect condition!
- Keep suitable containers available for any small parts to be removed!
- Only use original spare parts approved by the manufacturer!



IMPORTANT

Ensure that greases and other pollutants do not make their way into the drainage system. Collect waste oil and other environmentally harmful substances.

Properly dispose of these.

9.2 Technical Support

NOTICE

The following maintenance instructions are only intended as recommendations by the manufacturer!

The press operator is required to document maintenance-related observations and to expand and specify the maintenance instructions in this operating manual accordingly!

The maintenance instructions for purchased parts are also to be observed!

The following sections describe the maintenance work required for optimal and fault-free device operation.

If increased wear is identified during regular checks, the required maintenance intervals are to be shortened according to the actual signs of wear.

Please contact the company GECHTER Werkzeug- und Maschinenbau GmbH for questions about maintenance work and intervals.

➲ Please refer to the "Identification" chapter for how to contact the customer service of Gechter GmbH!

Observe the following specified time intervals for inspection and maintenance:

Interval	Maintenance work	Personnel
if necessary	**Press**: clean **Press carriage**: Lubricate the prism guide	Operator
Daily	**Press carriage**: Lubricate the prism guide (sliding guide oil Shell T 68 or equivalent)	Technically trained person-

NOTICE

National laws or provisions of more frequent inspection and/or maintenance of the device are to be observed.

9.2.1 Cleaning the press

⚠ DANGER

Risk of explosion from flammable cleaning agents!

There is a risk of explosion if benzine is used for cleaning. It is highly flammable, electrostatically chargeable and can produce an explosive gas-air mixture.

Use halogen-free cold cleaners with a high flash point for cleaning.

⚠ WARNING

Danger of injury from ignoring the manufacturer's specifications!

The press function may be impaired if the manufacturer's cleaning instructions are ignored.

Comply with all environmental protection regulations during cleaning.

Dust and heat leave residues on the press components an can cause functional disruptions.

Do not use any sharp tools for cleaning as they can damage the paint and thus cause corrosion.

Proceed as follows when cleaning the outside of the press:

- Only perform cleaning work with cloths, brushes and vacuum cleaners!
- Remove all aids after the cleaning is complete!
- Check the function of the cleaned area!

9.2.2 Lubricate the prism guide

	NOTICE	
	Do not use grease as this cannot spread through the channels inside the sled.	

The lubrication nipple for the prism guide is located on the front of the press sled.

➲ Lubricate the lubrication point with an oil press (e.g. sliding guide oil Shell T 68).

Lubrication point

9.3 Packing system parts

- The information for repackaging press parts is to be observed if the parts are to be sent in for repair.
- Use cardboard or other packaging material to package the press parts if necessary so that they are not damaged from external influences during transport.
- Secure press parts from unintentional tipping and instability during transport.

9.4 Wear and spare parts lists

	NOTICE	
	When replacing parts, only original parts or equivalent parts may be used, i.e. parts that have the same safety standard.	

The list of wear and spare parts for the individual press components is found in the "Wear and spare parts lists" in the appendix to this operating manual.

10. Faults

In the event of faults that cannot be independently rectified, contact the manufacturer's customer service department!

	WARNING	
	**Risk of hand injury from ignoring the hazardous area!** Dangers arise from human misconduct. Never remove jammed parts and foreign bodies with just your hand. Use appropriate tools.	

- Inform specialist personnel immediately in the event of faults!
- The system must be electrically and pneumatically disconnected before repair work!
- Switch off the press if necessary!
- Turn the main switch to the "0" position!
- Secure the main switch with a padlock!
- Set the main start-up valve of the pneumatic system to "OFF" and secure with a U-lock!
- Attach the following notice sign to the system!

Es wird gearbeitet!	It's being worked on!
Ort:	Location:
Datum:	Date:
Entfernen des Schildes nur durch:	The sign may only be removed by:

	NOTICE	
	Faults and their rectification, which are not covered int his chapter, are listed in the respective additional documents.	

10.1 Technical Support

	NOTICE	
	Please refer to the "Identification" chapter for how to contact the customer service of Gechter GmbH!	

10.1.1 Fault table

Error description	Cause	Remedial measure	Personnel
The press sled moves laterally or jams	The press sled has too much or too little play	Adjust the adjustment gib	Technically trained personnel
The hand lever only moves upwards with difficulty	Return spring broken	Install a new return spring	Technically trained personnel
	The press sled does not have enough play	Adjust the adjustment gib	Technically trained personnel

10.1.2 Adjusting the Adjustment Gib

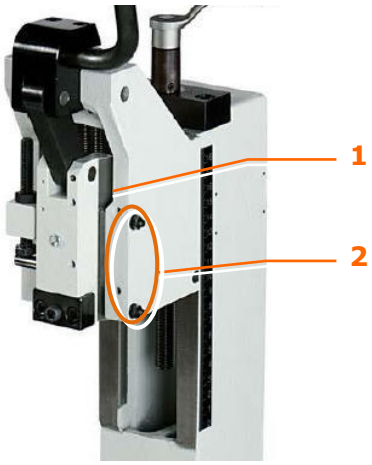
If the press sled has too little or too much play, i.e. it either can jam or move laterally, the adjustment gib must be adjusted.

Carry out the following activities:

- Loosen lock nuts on the right side of the guide unit with an open-end wrench.
- Align the adjustment gib evenly and in parallel by turning the threaded pins with an Allen key so that it has the same play up and down.
- Tighten lock nuts on the right side of the guide unit with an open-end wrench.

NOTICE

The adjustment gib may not be set too tightly since the press will not reach its specified press force and increased wear will occur.



Adjusting the Adjustment Gib

1 Adjustment gib **2** Lock nuts

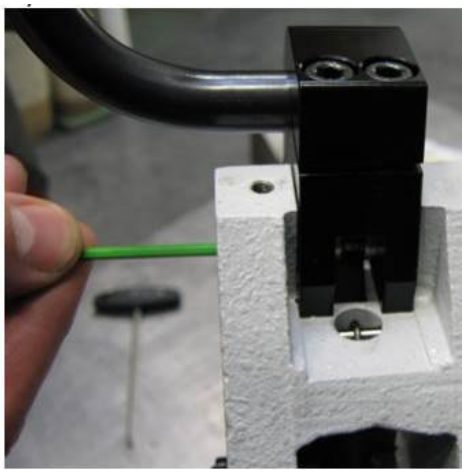
10.1.3 Changing the return spring

If the return spring breaks, it must be replaced.

The following activities are to be carried out according to the figures:

1.

2.



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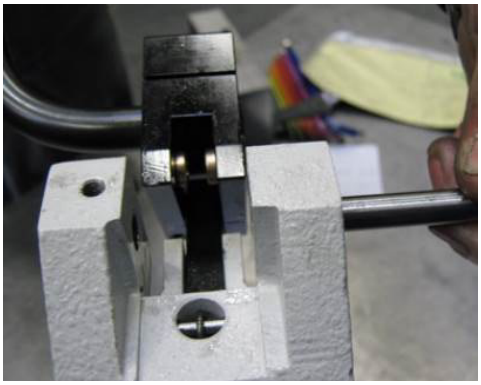

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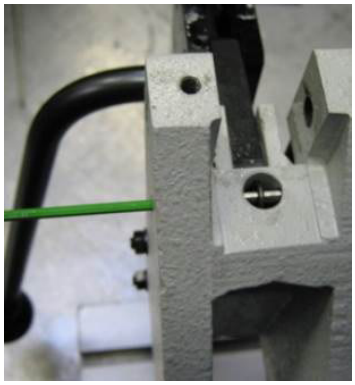
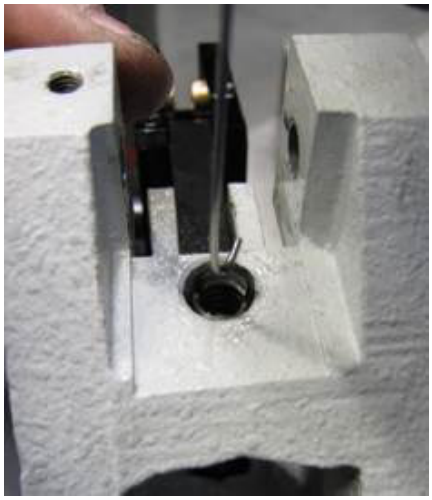


5.

6.

7.



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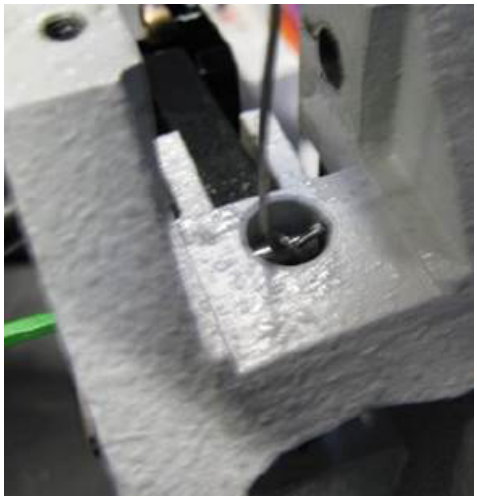

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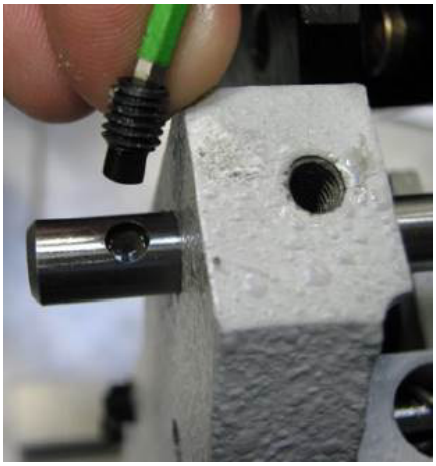

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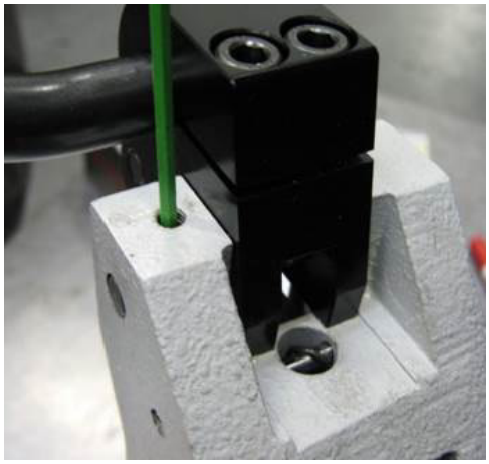

	NOTICE	
	Note The recommended change for the return spring is max. 18,000 - 20,000 work processes.	

11. Spare parts and ordering

11.1 Spare parts

➲ Only use spare parts and other parts from the system manufacturer Gechter GmbH!

See the spare parts drawings and parts lists for additional information!
The spare parts drawings and parts lists can be viewed or downloaded at www.gechter.com in the download area.

	NOTICE	
	Note In general, the "General terms and conditions of sale and delivery" of Gechter GmbH shall apply. These are available to the operator at the latest upon contract conclusion. You confirm the order with your signature!	

11.2 Order

➲ Contact the following address when ordering spare parts:

Gechter GmbH Werkzeug- und Maschinenbau
Ostring 3
90587 Obermichelbach

GERMANY

Telephone: 0911 / 982873-20
Fax: 0911 / 982873-99
E-mail: verkauf@gechter.com

The following information is required when ordering:

- Press type
- Press number
- Year of manufacture

12. Appendix

12.1 Register directory

Supplementary documents to this operating manual are attached in the following. The individual elements are separated from each other with index sheets.

- **DECLARATION OF COMPLIANCE**
- **PARTS LISTS / SPARE PARTS DRAWINGS**
- **SEE WWW.GECHTER.COM DOWNLOAD**
- **DOCUMENTATION FOR SUPPLIER COMPONENTS (OPTIONAL)**