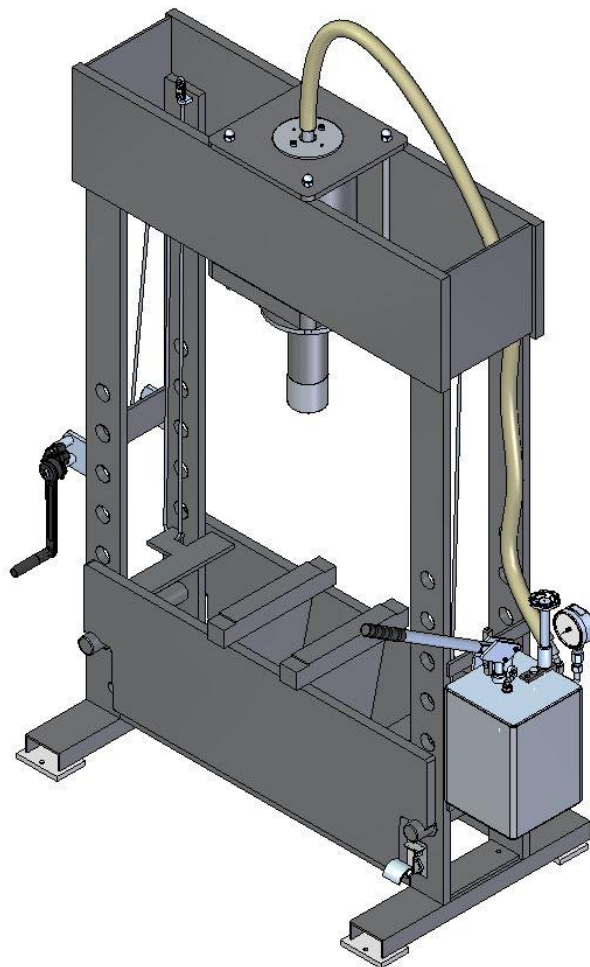


COMPAC

Operating Manual for Compac Shop Press

Model HP100 G4
Original instructions



Before using the product: Read and understand this manual.

This operating manual is also available on request in other languages at no additional cost.

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To the owner/user

Thank you for buying this Compac shop press.

With correct use and care, this product will give you many years of safe and reliable service.

Read this operating and safety manual before using the machine for the first time, for correct and safe use of your shop press.

Store this operator and safety manual with the product at all times.

Yours sincerely
Manufacturer
Compac Hydraulik A/S
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DK-7130 Juelsminde
Denmark
Tel.: (+45) 75 69 37 22
Fax: (+45) 75 69 54 18
E-mail: info@compac.dk
Web: www.compac.dk

Warranty

Compac Hydraulik A/S provides a 36-month warranty, from the date of purchase, against faulty materials and workmanship.

Compac Hydraulik A/S disclaims any responsibility for improper use, alterations in construction, use of non-original parts and repairs and adjustments made by unauthorized personnel.

Compac Hydraulik A/S reserves the right to make changes to the product without notice, if it can be done without significant changes to the technical specifications.



This unit was manufactured in accordance with the provisions in the COUNCIL DIRECTIVE OF 2006 (2006/42/EC) and DS/EN 693.

Owner:

Specifications

Type	Max. Capacity kg	Net weight kg	Stroke length mm	Oil, quantity
HP100 G4	100,000 (100 tons)	946	300	13L

Safety



Important: Read and understand the operating manual before transport, installation and operation!

All users must read, understand and follow all instructions and safety warnings in this operator manual and on the safety labels placed on the product before using the shop press.

All users must be able to operate the press safely and care for it in accordance with this operator manual. If the user is not fluent in the language in which the manual is written, it is the owner's responsibility to furnish a manual in the user's language, so the product may be used and cared for according to our instructions.

In case of questions regarding proper and safe use of this press, or if you require spare parts, a new label or operator manual, refer to the contact information on page 3 of this manual or on the product's rating plate.

Safety symbols



**DANGER
WARNING**

Safety symbols alert the user of a danger or unsafe use that **can** result in serious injury or death.



INFORMATION

Information symbols concerning general information for the product's safe operation, care etc.

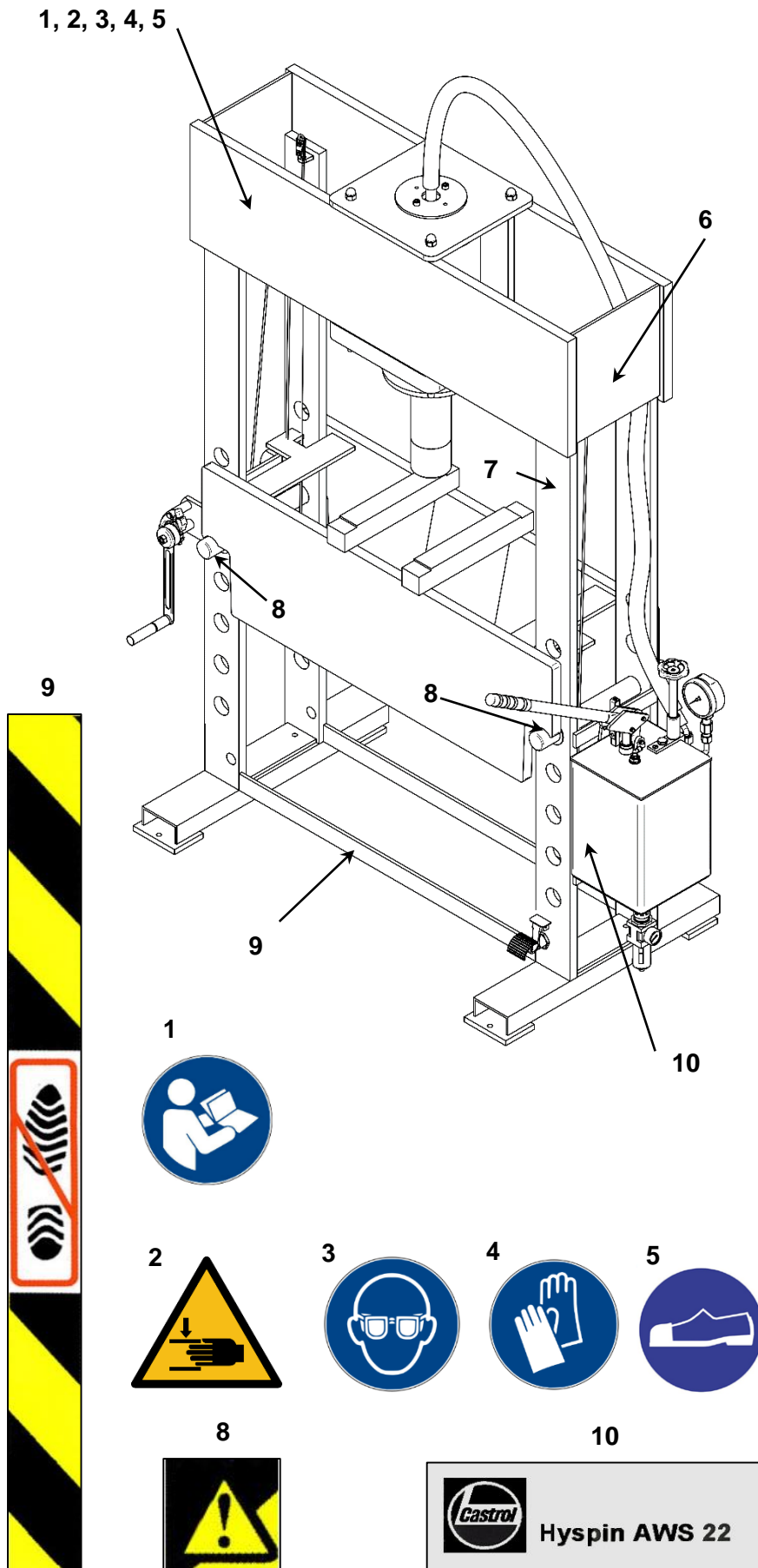


RISK OF TIPPING

Safety symbol indicates that the product may risk tipping and cause serious injury or death.

Required safety and information labels on the press

For specific information, see the attached CE Certificate.



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
Warning!

When operating the press, hands and other body parts must not be at risk of pinning!

The operator may not use the press:

- If there are others nearby the control!
- If there is a risk that the operator or others may be subject to tools or objects being hurled from the press!

6

COMPAC		Compac HydraulikA/S Strandhusevej 43 DK-7130 Juelsminde Denmark
Type/Typ/Typ/Type Type/Type/Type	XXXXX	
Kapacitet/Kapazität/Capacité/Capaciteit/Kapazität/ Capacity	XXXXX kg	
Slaglængde/Slaglængde/ Hub/Course/Slaglengte/ Slaglengde/Stroke	XXXXX mm	
Net.vægt/Net.vikt/Net.gew./ Poids.net./Net.gew./Nto.vek/ Net.weight	XXXXX kg	
År/Tilverkningsår/ Baujahr/Année/Bouwjaar/ Ar/Year of construction	XXXX - XX	
ADVARSEL ! Anvend ikke pressen ud over det angivne max. tryk og max. slaglængde.		
WARNING ! Använd inte pressen utöver det angivna max-trycket och slaglængde.		
WARNUNG ! Überschreiten Sie den angegebenen max.Druck und Hublänge der Presse nicht.		
ATTENTION ! Ne dépassez pas les spécifications de pression max. et de course indiquées.		
WAARSCHUWING ! Maximaal aangegeven persdruk en slaglengte niet overschrijden.		
ADVARSEL ! Bruk ikke pressen utover det angitte maks.1 ykk og slaglengde.		
WARNING ! Do not use the press beyond the max.indicated pressure and max. stroke.		
		presse



General safety

Safety instructions



Failure to observe the following may result in serious bodily injury or death, as well as damage to property.




The work press is intended only for normal shop use and not as a production press.
The press's maximum load is stated in the CE certificate and on the press's product label.



For all press uses, a risk assessment must be performed where the user must evaluate the risks that might arise!

The user must be especially aware of those risks of becoming pinned/pinched that may arise both with press use and the handling of winches and work items, etc.

With the handling, set-up, use and removal, the following means of protection must be used:

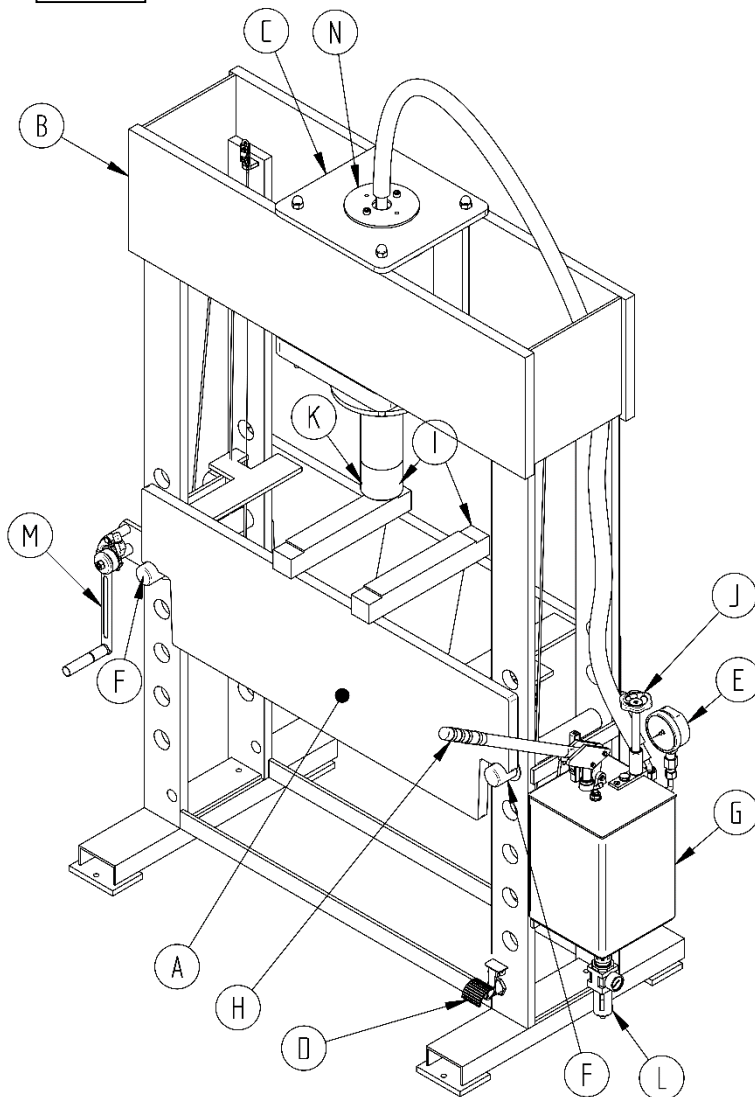
		
Protective goggles	Gloves	Protective footwear with toe protectors

- The press must be secured to a firm, level floor.
- Never make any alterations in the product's construction.
- Do not use the press in a way that exceeds its intended use and capacity.
- The press must not be used if it is damaged, leaking oil, or if the unit is functioning in a way that is different from the description in the operating manual. If this is the case, stop using the press immediately, contact an authorized service technician for inspection and, if needed, repair of the unit so that it may be used safely again.
- For all press uses, the press's table must be supported by both pins, and wire/winch must be slack.
- Vee blocks or the like must be correctly placed on the press table before use.
- Inspect the press visually prior to each use. Check for breaks, cracks or bent parts, loose or missing parts, and any other condition that could affect its proper and safe functioning.
- Take into account the risk of work items being flung out during use.
- Keep an appropriate, safe distance from the press/work item while using the press.
- When operating the machine, make sure that hands and other body parts are not at risk of becoming pinned.
- The operator may not use the press with others near the controls or if they are in danger of being hit by objects or tools.
- Inspection must be done by a qualified individual at least once a year.
- Use only original spare parts for safe and reliable operation.
- Make sure that warning and information signs on the product are legible and intact at all times.

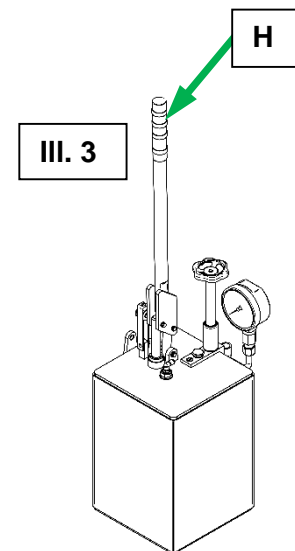
The press's A-weighted sound pressure level is under 70 dB(A)

Component overview

III. 2



Pos.	Name
A	Table
B	Chassis
C	Cylinder
D	Pedal
E.	Pressure gauge
F	Pins
G	Hydraulic pump
H	Pump handle
I	Vee blocks
J	Return handle
K	Pressure head
L	Pressure regulator (air)
M	Winch
N	Safety plate



Functional description

Turn the return handle (J) counter clockwise, so the ram returns.

Raise/lower the table (A) into the working position using the winch (M), and place the pins (F) in the holes in the press's chassis. Note that washers on pins must be between the table (A) and chassis (B).

Place the vee blocks (I) so that they adequately support the object.

Place the object under the cylinder's piston.

Turn the return handle (J) clockwise until the valve closes.

Before the foot pedal (D) is operated, the pump handle (H) must be in the top position) **see ill. 3**, in order to ensure the flow of intake air to foot pedal (D)

Operate the foot control (D) until the cylinder's pressure head (K) is directly over the object.

Next, pump using the pump handle (H) until you achieve the pressure needed and the press work is executed to satisfaction.

To return the rod, turn the return handle (J) counter clockwise.

Transport and installation of the press

RISK OF TIPPING



With regard to safe transport of the shop press, be aware that the press's center of gravity is very high.

When shipped, the press is secured to the transport pallet with screws and metal strips, which should only be removed when setting up the press.

Press transport



Failure to observe the instructions below can result in serious damage and injury

1. **With a forklift:** Place the forks under the top frame. The lifting points are marked on the transport packing material. (see Fig. 1).
2. **With a crane:** Use only approved hoisting straps with an approved capacity of at least the total weight of the press.
Note: mount the straps only at the top of the press, and protect them from sharp edges.

Figure 1

This lifting instruction is printed on the transport packing material at the top of the press.



On receipt of the press:

Check the packing material and the press for visible damage, cracks and leakage. The carrier must be notified of any damage occurring during transport.

Installation of the press:

The press must be secured to the floor using expansion bolts, for safe and stable installation.

Pre-commissioning preparation:

An experienced operator must visually inspect the press for leakage and damage. Such inspection must furthermore take place at least once a year.

The press comes filled with hydraulic oil.

Mounting of manometer

To prevent damage during transport, the manometer does not come mounted.

Mount the accompanying manometer according to these guidelines.

NOTE: NOTE DO NOT USE PACKING TAPE OR THE LIKE! The manometer is sealed with a cutting ring in the manometer fitting.

1. Tighten the manometer using a 22 mm fork wrench. Remember to counter this using a 27 mm fork wrench.
2. If the manometer is not facing correctly, you can turn it by loosening the lower coupling using a 24 mm fork wrench. Remember to counter this using a 27 mm fork wrench. Turn the manometer to the correct position and tighten the lower coupling while applying a counter force.

Connection of compressed air

The press is fitted with a pressure regulator with a water trap incorporated under the hydraulic pump's oil tank.

Connect clean and dry compressed air with 6 - 12 bar (88 - 176 psi) to the pressure regulator's supply socket.

NOTE! An oil mist lubricator must be mounted in connection with the connection of air to the press.

Adjustment of the pressure regulator

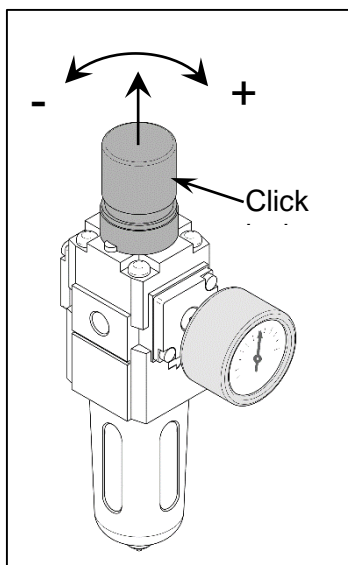
The pressure regulator can be adjusted by pulling up the click lock. (see Fig. 2)

To increase the pressure, turn clockwise (+). To lower the pressure, turn counter clockwise (-).

Adjust the pressure regulator according to the table below).

When you reach the correct working pressure, press the click lock down to lock the regulator.

Figure



Type	Min	Max
HP100	5 bar 0.5 Mpa 72 psi	6 bar 0.6 Mpa 88 psi

Bleeding of the hydraulic system

(The letter designation refers to the component list on page 7.)

Tighten the return handle (**J**), are run the cylinder's rod (pressure head) (**K**) until the cylinder rod is fully extended by activating the foot pedal (**D**).

Remember that the pump handle (**H**) must be in the top position.

Open the return handle again. This returns the rod and any air escapes.

Operating instruction

Lifting and lowering of the table



The table must be free of vee blocks, tools, work items and the like when lifting and lowering.

To lift and lower the table to the desired working height, the press is equipped with a winch. Before lifting/lowering the table, return the press's rod by turning the hydraulic pump's return handle counter clockwise.

Tilt out the handle (See Fig. 3) and turn the winch's handle clockwise to pull the table free from the pins. Take out the pins, and place the table in the desired working position. Lift the table slightly over the holes, to allow the pins (I) to be inserted in the column of the press.

Figure 3

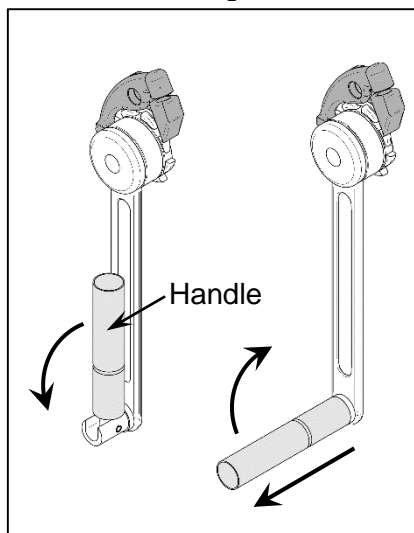
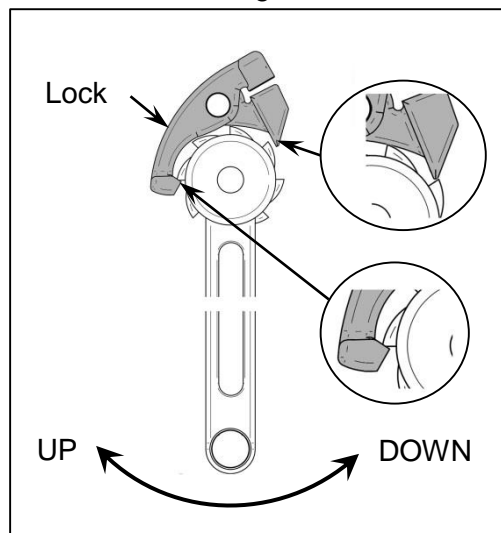


Figure 4



Now insert the pins correctly in the holes just under the table. (See Fig. 7) Now turn the handle, which has a built-in sliding clutch, counter clockwise, to lower the table onto both pins. Make sure the winch/wire is slack before using the press. You can now fold the handle's grip by pulling out while folding it in towards the arm.



NOTE: Because the table hangs freely from the winch during positioning, there is a risk of the table falling and causing damage or injury. Therefore, do not release the handle until one of the winch's locks is engaged with the turntable (see Fig. 4) before removing the pins.

Preparation of press table and vee blocks

1. The table must be placed as close to the returned rod as possible, so the piston always has the least possible projection (the shortest possible stroke length). In this way, the stress during pressing will be minimal, which reduces the risk of damage to the press cylinder, piston or chassis.
2. It is important that the pins are placed correctly and that the table/plate is perpendicular (not uneven) to the piston (see Fig. 7) for proper use/setting. The table must be correctly supported by both pins before the press can be used.



Mount the pins as shown in Fig. 7, with the washer between the table and chassis, and the piston should press perpendicularly on the object after being chocked up if necessary. If the pin is mounted incorrectly, with the washer outside the table as shown in Fig. 8, there is a significant risk of serious damage or injury.

Figure 7

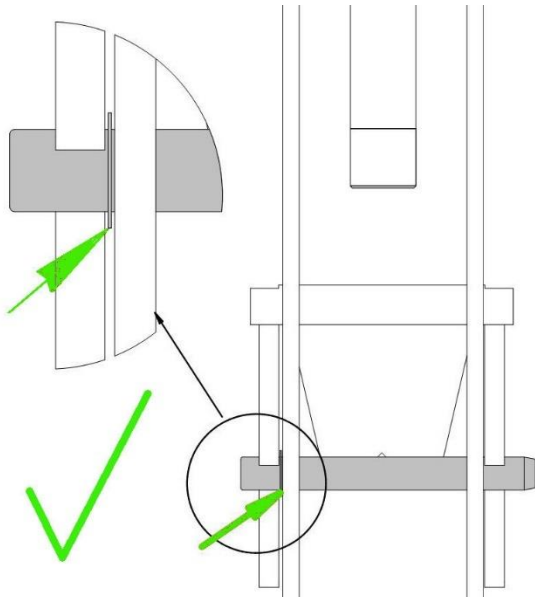
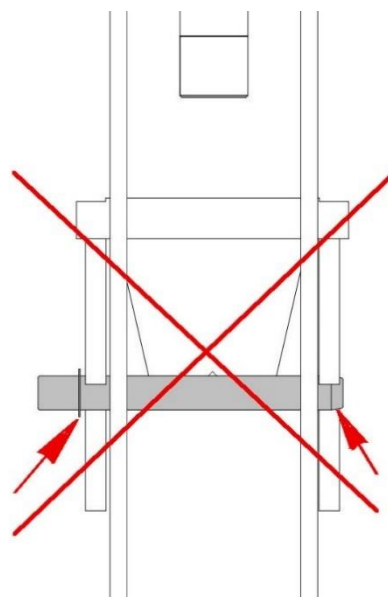


Fig. 8



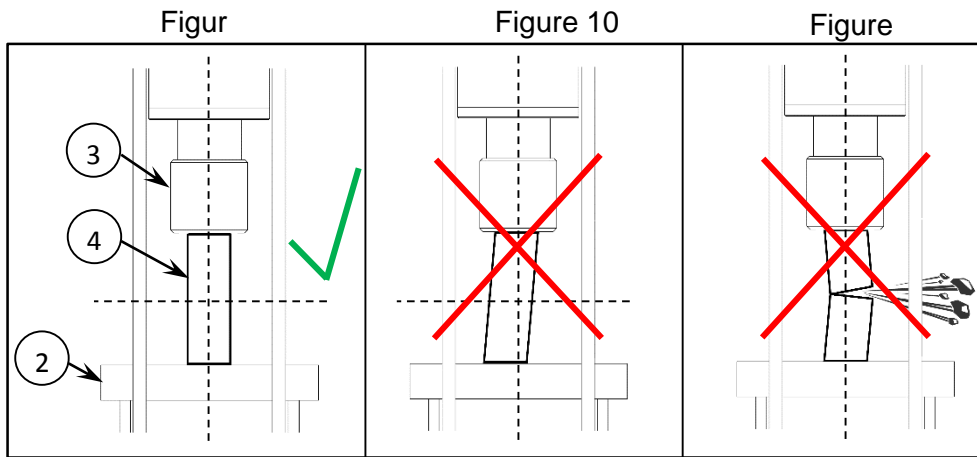
Placing the object

Place the object (4) so it is perpendicular and centered in relation to the piston (3) and the table/plate (2) if required (see Fig. 9). The object should not move during the pressing process.



If the object is slanted or asymmetrical, there is a significant risk of injury or damage to the press's cylinder, piston or chassis (see Fig. 10).

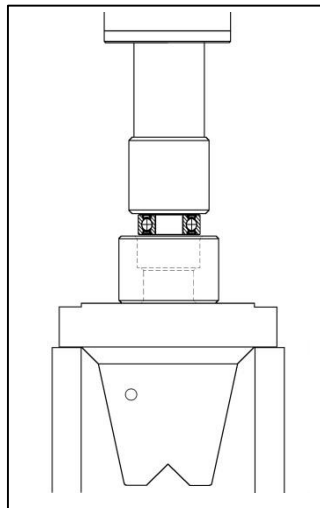
Do not press on work items that could burst or break, because this can injure persons or damage the press's cylinder, rod or chassis. (see Fig. 11).



Vee block or straightening plate

The vee blocks must always be used as support. (see Fig 12)

Figure



Side movement of cylinder

For work on work items that require more space between the press's vertical columns, it is possible to displace the cylinder out to the side. (see Fig. 13)

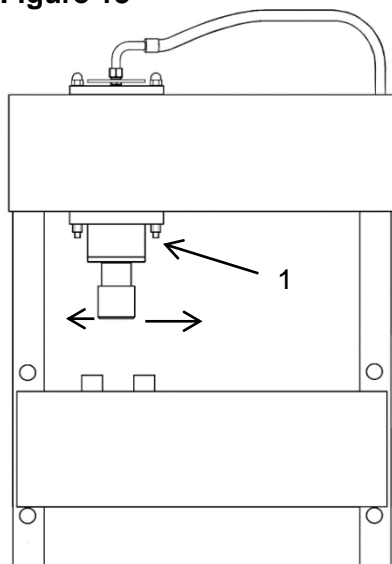
The cylinder's four bolts (1) are loosened with a 24 mm open-end wrench, and the cylinder can now be moved to the desired position.

Always fasten the cylinder before starting your work.



If the cylinder is able to move while under pressure, there is a risk of injury or damage.

Figure 13



Operation of the press

Adjust the table to the desired work height, and place the vee blocks on the table.

Note! At pressures over 40 % of the max. capacity, both vee blocks must support the object.

The press has a manual pump with three systems:

1. Rapid motion, which uses compressed air to quickly move the piston down to the object.
2. High pressure, which performs the actual pressing work.
3. Return, which returns the piston with the help of compressed air.

Rapid motion

Tighten the pump's return handle, and put the pump rod in the top position.

Activate the foot pedal, and the piston will quickly move down to the object. (With rapid motion, only light pressure on the object is achieved.) When the foot pedal is not activated, the main piston slowly stops moving.

Never use the press without the pressure head or pressure tool being mounted, as doing so will damage the piston.

High pressure

Tighten the pump's return handle, and put the pump rod in the top position.

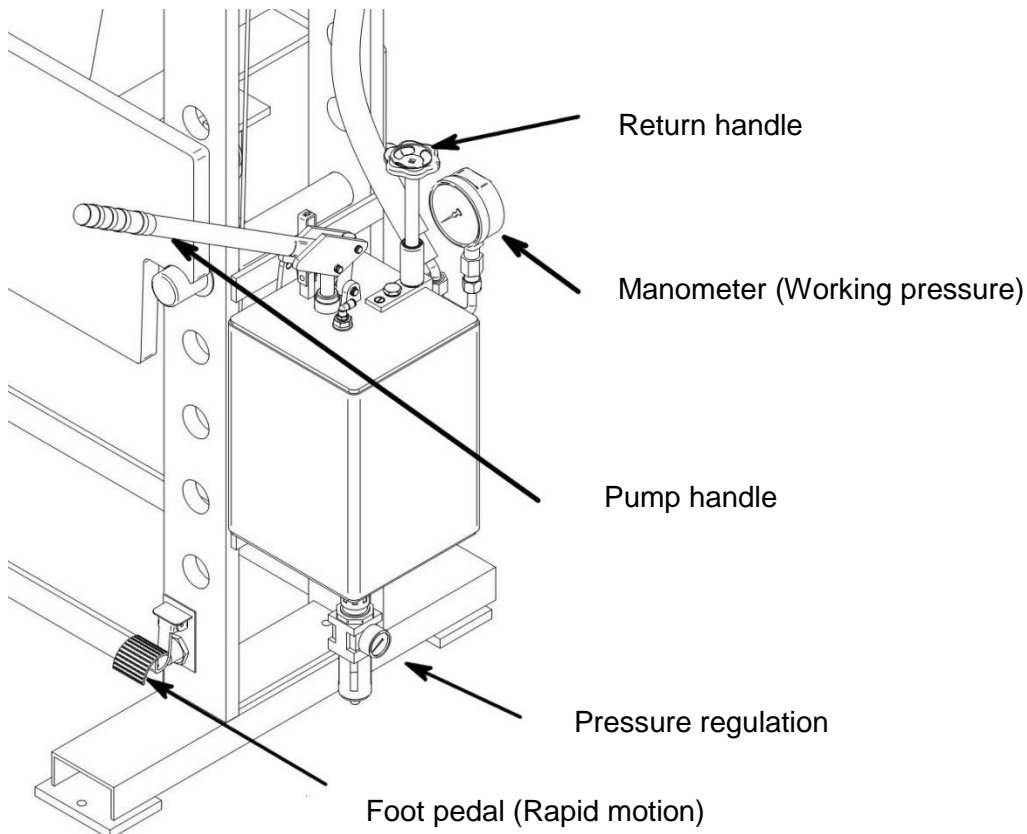
With the main piston placed all the way down near the object, use the handle to pump and execute the press work.

Return

Return the piston by placing the pump handle in the top position and then loosen the pump's return handle.



WARNING! Do not exceed the maximum pressure and maximum stroke, as this can damage the cylinder's gaskets. Therefore, do not continue to activate the pump's handle when the press has reached the full stroke length or maximum capacity.



Maintenance instructions



General maintenance

Follow these maintenance instructions to preserve the press's safety, performance and service life.

- All moving parts must be inspected, cleaned and lubricated once a month using a moisture-displacing and acid-free lubricant.
- Check the press for oil leaks and call an authorized service technician if required.
- In case of rust, remove the rust and protect with a rustproofing agent.
- Check that retaining rings, wire, nuts, bolts, and mandrels are intact and correctly mounted.

Cleaning

Ordinary cleaning with mild soap (i.e. dishwashing detergent, auto shampoo) and a soft brush. Thorough drying will protect the press's painted surfaces.

NEVER wash the press using a high-pressure cleaner, as this may damage the press's surface and components.

Water trap

Empty regularly by activating the valve at the bottom of the receptacle with a finger.

Failure to empty it will lead to corrosion of the piston and cylinder.

Errors arising due to failure to empty are not covered by the warranty.

Storing the press

The press should always be stored in vertical position in a dry and temperate climate.

Repair

Any required repair of the press must be performed by a hydraulic expert.

Use of non-original parts may make the press unsafe for use and nullifies the warranty.

Therefore, use only original parts from Compac for reliable and safe operation.

Oil level

If it becomes necessary to refill oil in the press, see the section "Periodic maintenance and inspection", and follow **action 3A**.

Oil information

Replace the oil at an interval of a minimum of 2 years.

Oil type: Castrol Hyspin AWS 22 or similar hydraulic oil with the same specifications.

Do NOT use brake fluid, motor oil or the like!

Monthly service

Check the oil level

Lubricate hinges and axle journals on pump handles with non-corrosive grease.

The cylinder is self-lubricating.

Annual maintenance

Please see the section "Periodic maintenance and inspection" and complete the log book.

Disposal/destruction

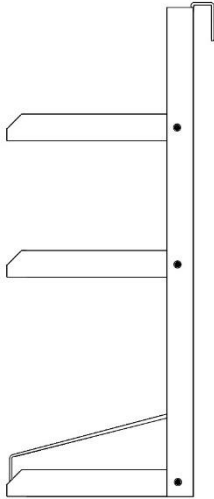
Re-use the transport packaging if possible, or bring it to a recycling center.

For service, drain the oil into an approved container and bring it to the proper authority.

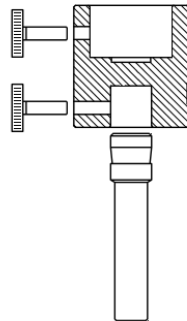
Press accessories

The press can be ordered with the following original accessories (additionally purchased equipment).

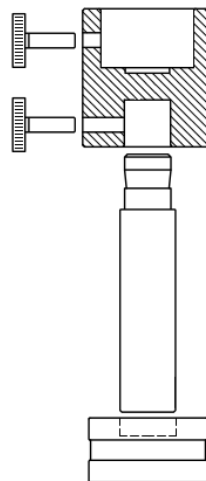
Shelf system



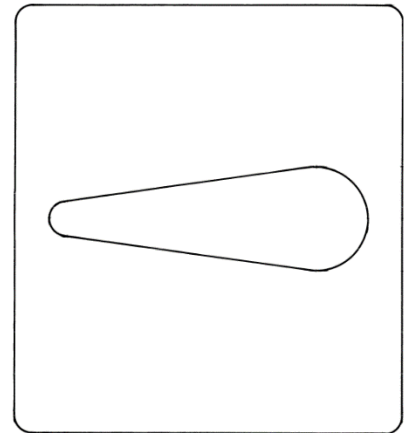
Mandrel set



Ball bearing set



Press plate



Shelf system

The shelf system is designed for storage of the other accessories and is hung loose at the top, on the left side of the press's chassis.

Ball bearing set

The press's standard pressure head is removed by unscrewing the small finger screw and pulling out the pressure head. The set comes with a pressure head adapter, which replaces the standard pressure head. Mount the accompanying mandrel in the adapter and secure with the small screw on the side of the adapter.

The accompanying press bricks are selected based on the bearing to be pressed.

Place the brick over the ball bearing and center it together with the pressure rod. The ball bearing is now ready to be pressed in or out.

Mandrel set

The press's standard pressure head is removed by unscrewing the small finger screw and pulling out the pressure head. The set includes a pressure head/adapter, the largest end of which should be facing up toward the piston, replacing the standard pressure head.

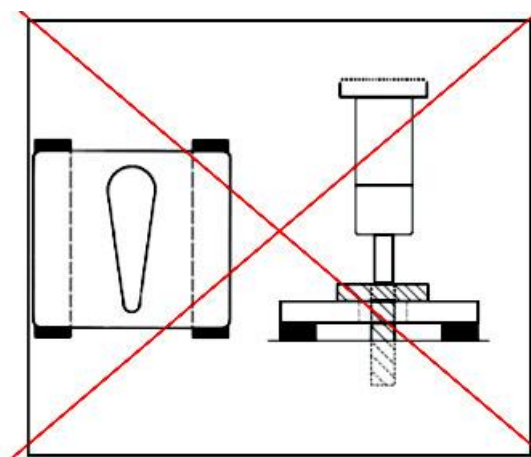
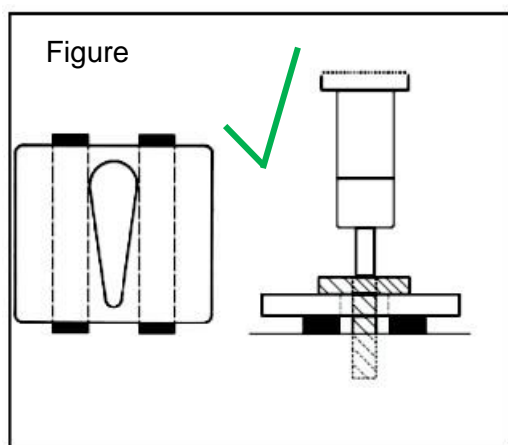
The selected mandrel is mounted in the adapter and secured with the small screw on the side of the adapter.

Press plate

The press plate is only designed to press, e.g. axles out of bearings or out of bushings or for separating objects that have been pressed together. The press plate is to be used together with the vee blocks as close to the tear-shaped hole as possible, to provide optimal support of both the object and press plate. (See Fig.12)

WARNING!!

The press plate is only designed for use at a pressure of **max. 8 tons**. If used at a higher pressure, it can become bent.



Periodic maintenance and inspection

With daily and annual service

Annual service and daily use

The press should be serviced annually in accordance with this operating manual.

It is always important that the user notes any irregularities or whether damage or defects arise during use and that they report this immediately to their immediate superior, so the errors can be remedied before the work continues.

Only persons certified in professional repair and maintenance of hydraulic equipment may perform the following service and maintenance of the Compac press.

Use only original parts from Compac.

Procedure for annual inspection and inspection in case of irregular operation.

Points of action are shown in the following illustration.

1. Identify the press

Based on the rating plate, identify the press capacity, model and date of manufacture.

If the factory-supplied documentation is missing, it is possible to find spare parts drawings and lists with spare parts numbers and guidelines via our Web site: www.compac.eu.

If the products are not from the current assortment, please see under "Discontinued models".

Use only original parts from Compac for the present product line.

2. Test equipment

Preparation of service inspection

To ensure the accuracy of the press manometer, it can be removed and sent for calibration. After calibration, it is mounted on the press again.

The press is now ready for service inspection.

3. Visual inspection

Check of oil level in the oil tank

Action 3A: The oil level must be as shown in the table.

Use only Castrol HYPIN AWS 22 or similar and never overfill the oil tank.

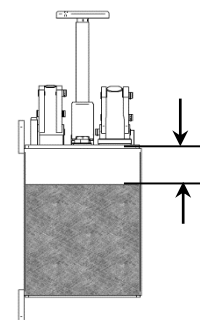
Remove the oil plug on the oil tank, drain the oil and refill with new oil. NOTE:

The oil level must be measured with a returned press piston.

When changing/filling oil, it is important to keep impurities out of the pump, as they can damage the hydraulic system.

Model	Oil, quantity	Oil level
HP100	13L	* 100 mm

* The oil level is measured from the edge of the filling opening and down to the oil window (See the illustration).



Check of retaining rings.

Action 3B: If a retaining ring is missing, rusty or not 100 % intact:

Clean the spot where the retaining ring was located and **replace the ring with a new one.**

Check for visible oil leakage from a hydraulic system

Action 3C: Pump the piston towards the table, and set the pressure to a minimum 10% of the press capacity by pressing with the piston's pressure head against vee blocks. Use a cushioning plate to protect vee blocks and piston head.

Look for leaks in pumps, cylinder and piping.

If leaks are found, replace the defective, leaking parts with new gaskets or new parts.

Check of visible corrosion

Action 3D: In case of visible rust, clean the damaged parts so it is possible to determine whether the rust has reduced the strength of the rusty parts. If so, replace the parts with new parts.

Before installing the new parts, make sure the parts have been lubricated or that the surface coating of the parts is intact.

Check of visible cracks in the welding

Action 3E: If there are visible cracks in the structure or welds, the parts can no longer be used. If it is possible to replace the part, do so.

A press with cracks may not be used until it is repaired.

Check of visible cracks in the paint covering the welds

Action 3F: In case of visible cracks in the paint, place the press under controlled pressure - at nominal capacity.

If the cracks grow in size, follow the instructions in 3D.

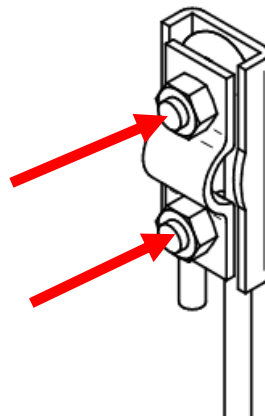
If the paint's cracks do not expand, the problem is only superficial.

Check of slack



Action 3G: Check that the table is hanging straight and that it is mounted as shown in the spare parts drawing. Check that the steel wire and winch are mounted correctly and with tension of 9.7 Nm (5mm wire). Make sure that the wheel for the wire, axle for the winch and the wire are neither worn nor show signs of tearing or corrosion (See G3 Fig.1)

If one of the three problems arises, **replace the part with a new part.**



Cleaning and lubrication of moving parts

Action 3H: Carefully clean the press and especially the moving parts.

If cleaning with soap and water, all moving parts must be greased well before use.

Check of the moving cylinder function

Action 3J: Loosen the bracket for the moving cylinder and move the cylinder from side to side. Check that all four bolts for suspension are mounted properly. Check for lubrication of parts that allow easy movement of the cylinder. Check that fastening of the cylinder is effective and precise.

Action 3N: Check that the securing washer with its securing bolt are mounted at the top of the cylinder.

In case of defect, replace the defective part.

Check of pressure hose between pump and cylinder

Action 3K: Check for deterioration of the hose. Signs of deterioration typically include the formation of tears in hoses (see 3K Fig. 2)

Always REPLACE the pressure hose in case of deterioration, as a hydraulic hose that is worn and under high pressure CAN BURST OUT in case of rupture, and spew oil and hose pieces, posing a risk to people nearby.



Check of pins for table

Action 3L: Check that pins are straight and show no signs of crack formation, corrosion or other defects. If in doubt, replace with new pins.

Check of the press markings

Action 3M: Check that all labels and warnings are intact and legible.

If not, obtain new labels and warnings by contacting Compac.

4. Testing and adjustment:

Pump the piston all the way out with NO LOAD. If the maximum stroke length cannot be achieved - check the oil level (see the operating manual).

Return piston. If you are unable to do this, it may be due to inadequate air supply. Check the air supply and, if necessary, check trigger or check for impurities or foreign objects lodged in the system.

Test of the hydraulic system under pressure:

Pump the piston to both vee blocks.

Use a cushioning plate on the vee blocks to protect them and the piston head.

Make sure that the table is properly supported by pins under the table.

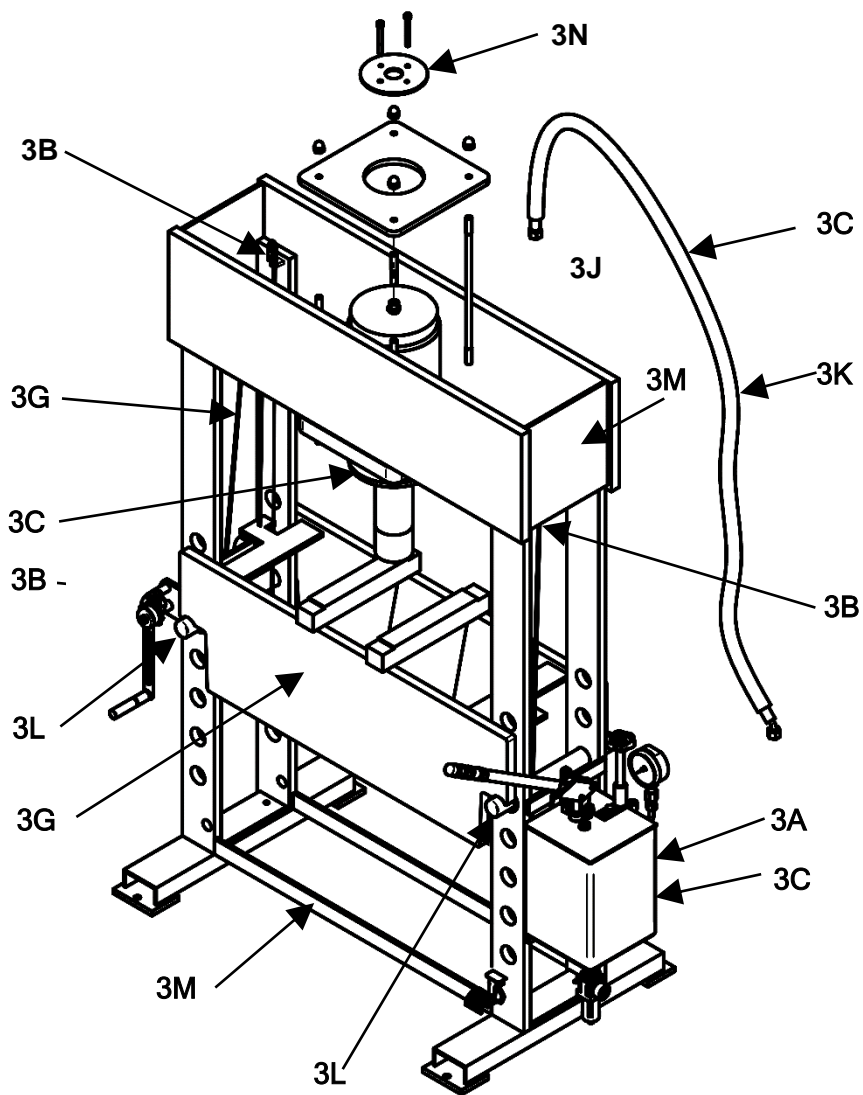
Ensure that the pins are correctly placed.

Build up pressure by pumping until nominal load is achieved.

Let the press stay under this pressure for two minutes. If the pressure loss is less than 5 tons after 2 minutes, the hydraulic system is fine and sufficiently free of leaks. (There must not be any flow of oil from the hydraulic system.)

Release the piston and let it return.

Service points



Action

- 3A: Oil level
- 3B: Retaining rings
- 3C: Leakage
- 3D: Rust
- 3E: Rupture
- 3F: Cracks in surface
- 3G: Table and wire
- 3H: Moving parts
- 3J: Cylinder bolts
- 3K: Pressure hose
- 3L: Pins
- 3M: Labels
- 3N: Securing washer

Figure 1

Defective wire (see 3G)

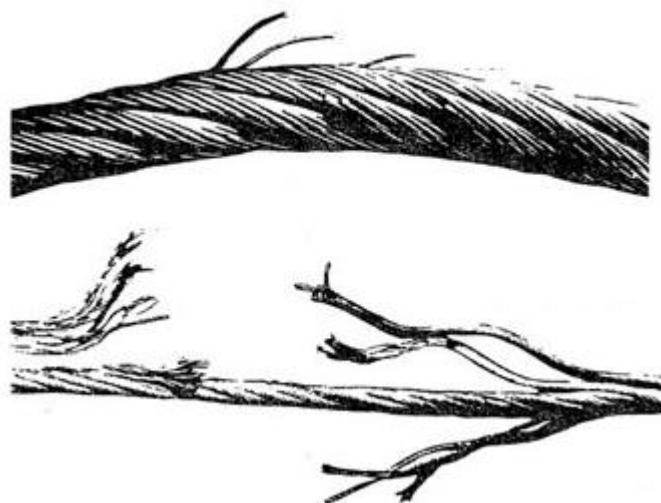


Figure 2

Defective pressure hose (see 3K)



Appendix - supplied on delivery of the press

- EU Declaration of Conformity
- Spare Parts Drawing / Spare Parts List
- Pneumatic Diagram
- Hydraulic Diagram

Sign Texts:

Warning!

When operating the press, hands and other body parts must not be at risk of pinning!

The operator may not use the press:

- If there are others nearby the control!
- If there is a risk that the operator or others may be subject to tools or objects being hurled from the press!