Operation Manual

Pneumatic Punch and Flange Tool

62797

Illustration similar, may vary depending on model

Read and follow the operating instructions and safety information before using for the first time.

Technical changes reserved!
Due to further developments, illustrations, functioning steps, and technical data can differ insignificantly.

Updating the documentation
If you have suggestions for improvement or have found any irregularities, please contact us.

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Introduction

Thank you for purchasing this quality product. **To minimise the risk of injury we urge that our clients take some basic safety precautions when using this device. Please read the operation instructions carefully and make sure you have understood its content.**
Keep these operation instructions safe.

Safety instructions

Warning! Read and understand all notes and instructions in this manual. Failure to observe can result in serious injuries.

Work area safety

- Keep your work area clean and well-lit. Untidy and poorly lit work areas increase the risk of accidents.
- Keep children and other bystanders away during operation. Distractions can make you lose control. Installation of barriers or shields as required.

Personal safety

- Always focus your full attention on your work and always work with foresight and prudence. Do not use this device when tired or under the influence of alcohol, drugs, or medicine. A moment of inattention during operation can result in serious injury.
- Do not wear loose clothing or jewellery, and securely tie long hair. Keep your hair, clothing, and work gloves away from moving parts as they can get caught in them and cause serious injury.
- Make sure that the throttle trigger **(20)** is not pressed before connecting the air supply. Carrying the tool with your finger on the throttle trigger **(20)** can lead to accidents.
- Always make sure to have a secure stance and to keep your balance. A secure stance and balance allow better control in unexpected situations.
- Wear approved safety equipment. Always wear eye protection, non-slip safety shoes, work gloves, a hard hat and hearing protection.

Special safety instructions

- Do not remove the plate protector **(8).**
- Only use clean, dry, regulated compressed air with a maximum of 6.2 bar (90 psi). Never use oxygen, carbon dioxide, flammable gases, or other bottled gas as a power source for this device. Do not exceed the maximum pressure of 6.2 bar (90 psi).
- Maintain labels and type plates on the tool. These contain important information.
- Provide a safe working environment and make sure that there is sufficient space around the workplace.
- Avoid unintentional start-up. Make sure to be prepared for work before connecting the air supply and pressing the throttle.
- Never leave the tool unattended when it is connected to an air supply. Before leaving the device, disconnect it from the air supply.
- Read and follow all safety warnings and instructions in the instructions provided by the manufacturer of the air compressor that you are using with this device.
- Pay attention to the material thickness. Never attempt to punch or flange material that is thicker than 1.2 mm. Failure to do so could damage the tool and/or result in personal injury.
- Material guidance and support may be required. When working on large materials, you may need the help of an assistant or trestles (not included) to keep the flange straight or to punch the holes evenly.

Safety during use and maintenance

- Use clamps (not included) or other aids to secure and support the workpiece on a stable platform. If the workpiece is held by hand or pressed against the body, it becomes unstable and can cause loss of control.
- Use the right tool for the job. The right tool works better and more safely when used at the speed which it is designed for.
- Do not use the tool if it cannot be switched on or off using the throttle lever **(20).**
- Disconnect the device from the air supply before performing maintenance work, changing the inlet, or storing the tool. This preventive safety measure reduces the risk of the tool being accidentally put into operation.
- Store unused tools out of the reach of children and other untrained people. This device is dangerous in the hands of inexperienced users. Never let children come into contact with this product.
- Maintain the tools with care. Keep the device clean. Properly maintained tools are less likely to get stuck and are easier to control. Do not use a damaged tool and make sure that no one else is using the tool if it is damaged.
- Check for any moving parts misaligned, jammed, or broken, or for any other condition that could affect the operation of the tool. If the device is damaged, have it serviced by a professional before using it again. Many accidents are caused by poorly maintained tools.

Safety during repair

- Tool repairs may only be carried out by qualified repair personnel. Maintenance work carried out by unqualified personnel can result in injuries.
- Only use identical spare parts when servicing a tool. Follow the instructions in the “Inspection, maintenance, and cleaning” section of this manual. The use of unapproved parts or failure to follow the maintenance instructions could result in damage to your workpiece and/or personal injury.

Air supply mounting instructions

Warning! Make sure that the throttle trigger **(20)** of the tool is switched off and the tool is disconnected from the air supply before making any adjustments.

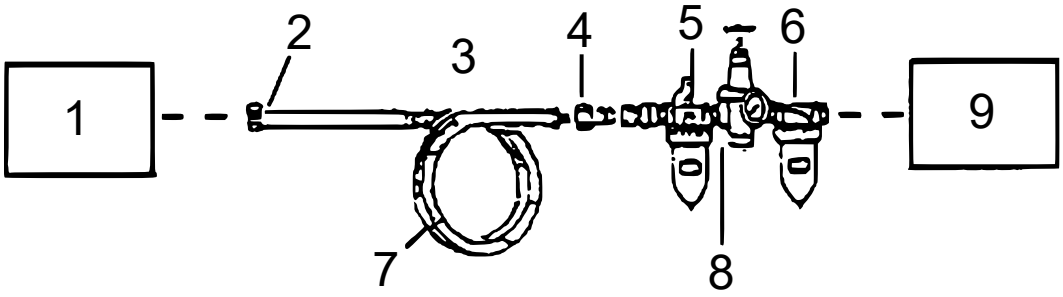


Figure 1

№	Name	№	Name
1	Tool	6	Filter
2	Hose line	7	Air hose rolled up
3	Female thread (¼")	8	Regulator
4	Air valve	9	Air compressor
5	Oiler		

Notes!

- To ensure that the tool works optimally, install an oiler, regulator and inlet filter as shown in Fig. 1. Please note that the oiler, regulator, and filter are not included in the scope of delivery.
- If not using an automatic oil system as shown in Fig. 1, add a few drops of pneumatic tool oil (not included) to the airline connection. Add a few more drops after every hour of continuous use.
- Prepare a ¼" air connection (not included) by wrapping tape around the thread before connecting it to the air inlet **(19)** in the bottom of the device. Insert the air hose from your compressor into the device at the air inlet **(19).**
- Set the air pressure on your compressor. Do not exceed 6.2 bar (90 psi).
- Periodically check the air connections to ensure that they remain secure.

Operation

Punching

1. **Warning!** Always wear thick work gloves when working with sheet metal. Sharp edges can cause serious injuries. Also wear protective goggles.
2. Mark the desired position of each hole that you want to punch on the workpiece.

Note! If the workpiece is to be both punched and flanged, first flange it and then measure the hole locations. Flanging changes the dimensions of the workpiece.

3. Connect the air punch to the air supply. Do not exceed 6.2 bar (90 psi).
4. Insert the edge of the workpiece between the punch die **(3)** and the punch **(6).** Make sure that your markings are aligned with the punch die **(3).**
5. Press the throttle **(20)** and the punch **(6)** will punch the workpiece.
6. Align the tool with the next mark on the workpiece and repeat step 5 until the process is complete.
7. Disconnect the device from the air supply.

Warning! After the device has been disconnected from the air supply, there may still be enough air pressure to trigger it. After verifying that the air supply is off, operate the device several times to ensure that the entire air is released from the tool.

Flanging

1. **Warning!** Always wear thick work gloves when working with sheet metal. Sharp edges can cause serious injuries. Also wear protective goggles.
2. Measure the workpiece and cut it to the correct dimensions.
3. Connect the air punch to the air supply. Do not exceed 6.2 bar (90 psi).
4. Secure the workpiece in a vice or other suitable clamping device.
5. Insert the workpiece into the flange jaw between the anvil **(9)** and the clamp **(1).** Make sure that it is completely flush with the back of the anvil **(9)** and the clamp **(1).** Press the throttle **(20);** this presses the anvil **(9)** against the clamp **(1),** and a flange is formed.
6. Release the throttle **(20).** Continue sliding the tool along the edge of the workpiece until the anvil **(9)** and clamp **(1)** are right next to the part of the workpiece just flanged. Repeat step 5.
7. Repeat steps 5 and 6 until the entire length that you want to flange is finished.
8. Disconnect the tool from the air supply.

Warning! After the device has been disconnected from the air supply, there may still be enough air pressure to trigger it. After verifying that the air supply is off, operate the device several times to ensure that the entire air is released from the tool.

Inspections, maintenance, and cleaning

Warning! Before carrying out any inspection, maintenance, or cleaning work, make sure that the throttle control **(20)** is in the off position and that the compressed air tool is disconnected from its air supply.

1. Before each use, inspect the general condition of the tool and check for loose screws, misalignment or jamming of moving parts, cracked or broken parts, and other circumstances that could affect safe operation. If you hear strange noises or vibrations, have the problem corrected before further use. Do not use damaged devices.

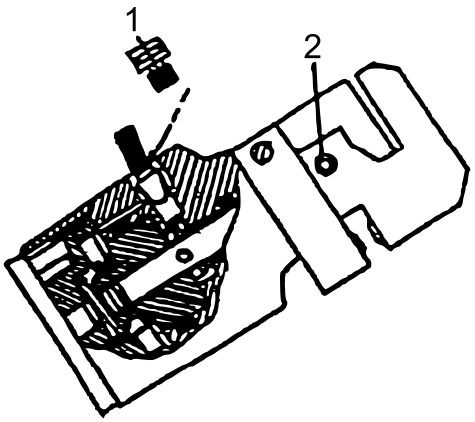


Figure 2

№	Name
1	Oil plug **(13)**
2	Adjusting screw **(2)**

2. If necessary, fill the hydraulic system with high quality hydraulic oil. Remove the oil plug **(13),** top up with oil, then reinsert the oil plug **(13)** (see Fig. 2).
3. To adjust the punch, loosen the adjusting screw **(2)** and turn the tool head. Re-tighten the adjusting screw **(2)** after you have made the desired setting.

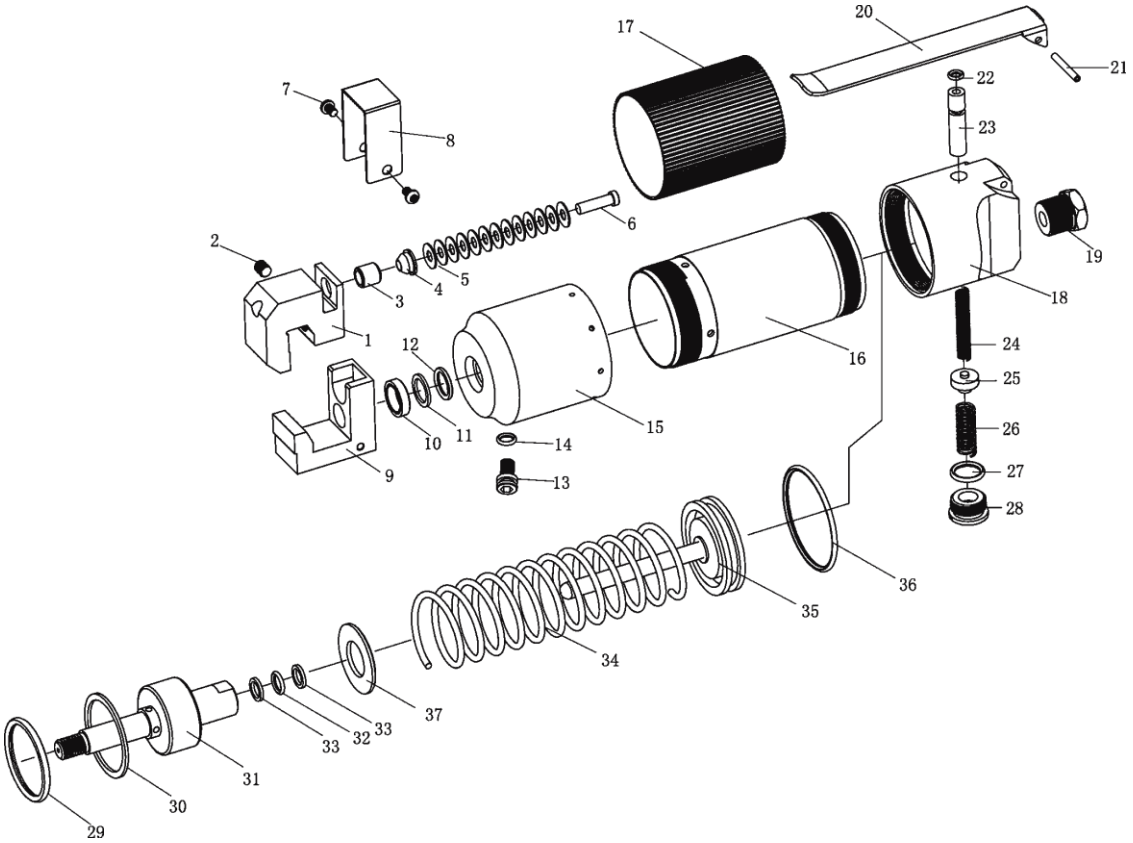
Maintenance chart

Intervention	Before use	After use
Check tool for damages.	X	
Check oil level.	X	
Wipe with clean, damp cloth.		X

Troubleshooting

Problem	Possible causes	Possible solutions
Device does not start	Air supply not connected	Ensure that the air supply is properly connected to the tool.
	Air hose not connected securely or damaged, resulting in air leakage	Check all air hoses and connections. If the air hose is damaged, replace the damaged hose. Do not repair damaged areas with tape or the like.
The device does not work evenly when punching and/or flanging.	Possible dirt/deposits in moving parts	Make sure that the anvil **(9)** and clamp **(1)** as well as the punch die **(3)** and punch **(6)** are free of dirt and deposits.

Exploded view and parts list



№	Name	Qty.	№	Name	Qty.
1	Clamp	1	20	Throttle lever	1
2	Adjusting screw	1	21	Spring pin	1
3	Punch die	1	22	O-ring	1
4	Guiding socket	1	23	Driving rod	1
5	Disc spring	13	24	Spring	1
6	Punch	1	25	Valve	1
7	Screw	2	26	Spring	1
8	Plate protection	1	27	O-ring	1
9	Anvil	1	28	Screw	1
10	Oil sealing	1	29	O-ring	1
11	Support ring	1	30	Support ring	1
12	O-ring	1	31	Hydraulic piston	1
13	Oil plug	1	32	O-ring	1
14	O-Ring	1	33	Support ring	2
15	Hydraulic cylinder	1	34	Spring	1
16	Air cylinder	1	35	Piston	1
17	Plastic film	1	36	O-ring	1
18	Valve housing	1	37	Spring washer	1
19	Air connection	1			

Technical specifications

Max. sheet thickness (mm)	1.63 (soft steel)
Air supply connection (inch)	¼ (NPT socket)
Air consumption (l/min)	approx. 113 (with 6.2 bar (90 psi))
Recommended air pressure (bar)	6.2 (90 psi)
Clamp jaw depth (cm)	1.58 (⅝")
Flanging width (cm)	2.22 (⅞")
Punching size (cm)	0.48 (0.19")
Hole position (cm)	0.72 (0.287") (hole centre to work piece edge)
Head turning angle (°)	360