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WERKZEUGFABRIK

Operating instructions for

Hydrauliksystem
Genius

CIMCO-Werkzeugfabrik - D-42855 Remscheid - www.cimco.de

Hydrauliksystem GENIUS

Contents

1 General information

1.1 Components of these operating instructions

The following form part of these operating instructions:

- GENIUS hydraulic system
- Crimping head, 300 mm² and 185 mm²
- Cutting and punching head
- Rechargeable battery, appropriate for the GENIUS hydraulic system

Instructions for the battery charger and the battery supplied are fully covered by the producer's operating instructions (see mention on the charger and the battery). CIMCO Werkzeugfabrik does not provide a guarantee of completeness.

1.2 Before start-up

It is essential to keep the following in mind:

- Checking the completeness of delivery and monitoring
  the delivery with regard to any transport damage
- The safety regulations
- The operating instructions

1.3 Reading these operating instructions

For use and charging of the battery, read the producer's operating instructions for the charger and the battery. If you have any questions after reading these operating instructions, please get in touch with the producers or your nearest customer service point (see guarantee card for addresses). We will not accept any liability for damage or faulty operation resulting from disregard of the operating instructions.

1.4 Illustrations and technical alterations

Illustrations may deviate from actual appliances and are not binding on our part. In order to comply with rapidly changing customer demands, we reserve the the right to make technical alterations to the machines without prior notice.

1.5 Translations

The German language version of these operating instructions is the sole legally valid version.

1.6 Storage

Store these operating instructions in a safe place.

1.7 Further information

Producer
CIMCO Werkzeugfabrik
42855 Remscheid, Germany

Country of origin Switzerland
Valid for GENIUS hydraulic system

2 Safety information in compliance with EN

2.1 General safety information

WARNING Please read all safety information and instructions. Failure to comply with the safety information and instructions may cause electric shock, fire and/or serious injury.

Please keep all safety information and instructions for future reference. The term „electric tool" used in the safety information refers to mains-operated electric tools (with mains cable) and to battery-operated electric tools (without mains cable).

1) Safety in the workplace

a) **Keep your work space clean and well lit.** Untidy and poorly lit work spaces can lead to accidents.

b) **Do not work with the electric tool in an environment where there is danger of explosion, or which contains flammable liquids, gases or various kinds of dust.** Electric tools create sparks that may ignite dust or vapour.

c) **Keep children and other persons away while using the electric tool.**
If distracted, you may lose control of the appliance.

2) Electrical safety

a) **Avoid physical contact with earthed surfaces, such as those of pipes, heaters, stoves and refrigerators.** There is an increased risk of electric shock if your body is earthed.

b) **Keep electric tools away from rain or moisture.** If water penetrates the electric tool, this will increase the risk of electric shock.

3) Safety of persons

a) **Be observant, pay attention to what you are doing and be sensible when working with an electric tool. Do not use an electric tool if you are tired or under the influence of drugs, alcohol or medication.** A moment's inattention when using the electric tool can lead to serious injury.

b) **Wear personal protective equipment and always wear safety glasses.** Wearing personal safety equipment, such as a dust filter mask, non-slip safety shoes, safety helmet or ear protectors, appropriate to the type of tool and its use will reduce the risk of injury.

c) **Avoid accidental start-up. Make sure that the electric tool is switched off before you connect it to the power supply and/or the battery, pick it up or carry it.** If you have your finger on the switch when carrying the electric tool or connect the appliance to the power supply when it is switched on, this may lead to accidents

d) **Remove any adjustment tools or spanners before switching on the electric tool.** A tool or spanner in a rotating part of the appliance can lead to injuries.

e) **Avoid any unusual posture or position. Ensure that you are standing securely and keep your balance at all times.** If you do so, you will be able to control the tool better in unexpected situations.

f) **Wear suitable clothing. Do not wear wide clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothing, jewellery or long hair may be caught up in moving parts.

4) Use and handling of the electric tool

a) **Do not overload the appliance. Use the electric tool appropriate for your task.** If you use the appropriate tool, you will work better and more safely in the specified area of work.

b) **Do not use any electric tool with a defective switch.** An electric tool that cannot be switched on and off is dangerous and must be repaired.

c) **Pull the plug out of the socket and/or remove the battery before adjusting the appliance, exchanging accessories or putting the appliance away.** These safety precautions will prevent accidental start-up of the tool.

d) **Keep electric tools not in use out of the reach of children. Do not allow any person to use the appliance who is not familiar with it or has not read these instructions.** Electric tools are dangerous if used by inexperienced persons.

e) **Take good care of electric tools. Check whether the moving parts are functioning perfectly and without jamming, whether parts are broken or damaged in such a way as to have a detrimental effect on the function of the tool. Have damaged parts repaired before using the appliance.** Many accidents are caused by poorly maintained electric tools.

f) **Keep the cutting tools sharp and clean.** Well-maintained cutting tools with sharp cutting edges will jam less frequently and are easier to guide.

g) **Use the electric tool, accessories, inserted tools etc. according to these instructions. Take the operating conditions and the task to be carried out into account.** Using electric tools for tasks other than those for which they were intended can lead to dangerous situations.

5) Use and handling of the battery tool

a) **Only charge the batteries in chargers recommended by the producer.** There is a risk of a charger intended for a particular type of battery catching fire if it is used for other batteries.

b) **In electric tools, use only the batteries intended for the tool.** Using other batteries may lead to injuries and the risk of fire.

c) **Keep batteries not in use away from paper clips, coins, keys, nails, screws or other small metal objects that could cause a bridging of the contacts.** A short-circuit between battery contacts can cause burns or fire.

d) If the battery is used wrongly, it may leak fluid. **Avoid skin contact with the battery. If the fluid accidentally comes in contact with skin, rinse off with water. If the fluid comes in contact with the eyes, also get medical attention.** Leaking battery fluid may cause skin irritation or burns.

6) Service

a) **Only allow qualified experts to repair your electric tool, using only authentic replacement parts.** This will ensure that the safety of the tool is retained.

2.2 Special emphasis in these operating instructions

Read the safety information in these operational instructions and always keep it in mind! Special emphasis in this safety information is shown as follows:

Marks an instruction that may lead to injury or death if not complied with..

Marks an instruction that may lead to damage to the appliance or property if not complied with.

Marks explanatory information or a special instruction.

Listed points

Straightforward listed points are marked with the symbol • before the line:

- 1. Sample line
- 2. Sample line

Steps (where you do something!) are marked with an arrow ▶ in front of the line:

▶ 1. Step

▶ 2. Step

Follow the sequence of stepsn.

2.3 Intended use

The GENiUS hydraulic system is used for crimping and cutting cables with the corresponding cable lugs, as well as for hole punching sheet metal. In the GENiUS hydraulic system, only crimping inserts may be used that are designed by the producer for a pressing strength of 60 kN.

2.4 Residual risk

If the machine is used improperly, the operator may crush his/her fingers.

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3 Technical data

GENiUS hydraulic system

Nominal capacity	320W
Voltage	18 V DC
Machine monitoring	electronic
Sound pressure level	81 dB
Uncertainty	3 dB
Sound power level	92 dB
Uncertainty	3 dB
Vibration level	1.16m/s²
Uncertainty (K)	1.5m/s²
Power transmission	hydraulic
Shear force on the piston	60 kN
Weight with battery	2.750 kg
Li-Ion rechargeable battery capacity	18V/1.6 Ah

(Guideline values, we reserve the right to make changes)

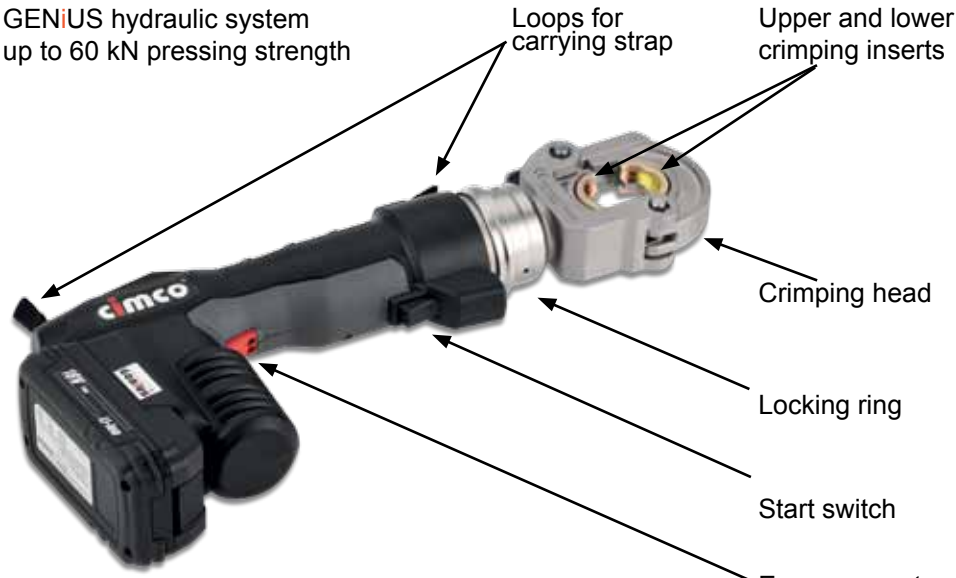
The vibration emission value given was measured in accordance with EN 60745-1 and can be used for comparison with other electric tools.

During use of the hydraulic system, the vibration emission value may diverge from the given value. The vibration emission value is independent of the manner in which the hydraulic system is used.

4 Description of appliance and functional principle

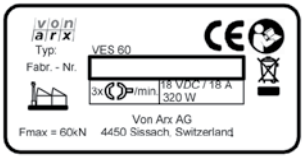
4.1 Functional principle

GENiUS hydraulic system
up to 60 kN pressing strength



The hydraulic system has electro-hydraulic function; the hydraulic pump is driven by an electric motor. The oil pressure takes effect on the working piston, which is pressurised only on one side. The working piston moves forward to act on the piston rod in the crimping head. The lower crimping insert is moved forward until it impacts on the upper crimping insert. Once it reaches this position, a hydraulic valve switches over and the lower crimping insert returns to the home position.

Max. 3 crimping, punching and cutting processes per minute



= Machine's year of construction

4 Description of appliance and functional principle

4.2 Performance features

Performance features:

- Quick change system for crimping, cutting and hole punching head
- Automatic return after maximum pressing strength of 60 kN is reached

- Heads can be rotated a full 360°!

- It is possible to interrupt the crimping, cutting or punching process (by releasing the start switch)

4 Description of appliance and functional principle

4.3 Changing crimping inserts

Additional safety instructions:
Before changing the crimping inserts, remove the battery or take the crimping head out of the machine. Do not change the crimping inserts until this has been done.

1. Open the crimping head

2. To remove the crimping insets, push them out to the side

3. Place the crimping insert in the lower section of the crimping head

4. Place the crimping insert in the upper section of the crimping head

5. Close the crimping head

1. Pull back the locking ring and insert the appropriate head

2. Check that the head is correctly locked. The edge of the locking device on the head must be covered by the locking ring.

3. Insert battery

4. Switch on machine, green LED lights up

4 Description of appliance and functional principle

4.5 Crimping

1. Insert cable into the crimping head

2. Push terminal lug onto the cabl

3. Carry out crimping while the start switch is pressed. The crimping process has been correctly completed when the lower cheek plate returns to the home position by itself

Emergency stop function

Pressing the emergency stop will automatically retract the lower crimping insert.

1. Place the cable in the cutting head

2. Carry out cutting procedure while pressing the start switch. The cut has been correctly completed when the cutting knife returns to home position by itself or the cable has been completely cut through.

Emergency stop function

Pressing the emergency stop will retract the cutting knives automatically

4 Description of appliance and functional principle

4.7 Hole punching

1. The sheet metal hole puncher to be used is to be mounted in the punching head..

2. After an appropriate hole has been pre-drilled, the hole puncher plus the die and the tie bolt are introduced into the hole and then locked finger-tight with the punch

4. Carry out punching while pressing the start switch. The punching process has been correctly completed once the sheet metal has been punched right through without any residue.

Important:
The punching process must then be stopped immediately If it is continued until automatic switch-off, it can lead to destruction of the hole punchers.

Emergency stop function

Pressing the emergency stop will retract the hole puncher automatically..

4 Description of appliance and functional principle

4.8 Permitted / not permited

Ready for crimping!

The crimping process must not be started without crimping inserts!

The appliance must not be started without a head!

Piston rod in home position

If the machine has been started without a head having been inserted, the piston rod must be returned to the home position by pressing the emergency stop

If an almost discharged battery is used during crimping, the machine will automatically stop the crimping procedure. This will protect the battery from exhaustive discharge

Important: In this case the crimping head must be returned to the home position by pressing the emergency stop. If this is not done, the machine‘s electronics may be damaged. Now exchange the discharged battery for a charged one and the crimping procedure can be started again.

4.9 LED function

LED	Condition	Description
green	*Lit*	*Machine ON*
	Flashing	*18V: charge battery*
red	*Lit*	*Outside temperature range -5 °C – +50 °C*
yellow	*Flashing*	*Service display after 30,000 strokes*
	Lit	*Machine is blocked – Service after 32,000 strokes or a defect*

4 Description of the appliance and function

4.7 LED function

The hydraulic system is monitored electronically to protect against operating errors and to ensure fault-free pressing. The condition or the event is displayed by light-emitting diodes (LEDs).

The following are monitored:

- Voltage/battery capacity
- Service interval
- Operating temperature

Condition displays after switching on the hydraulic system

► Push battery into the hydraulic system.

► Press the «ON-OFF» switch. To monitor the function of the three LEDs, the LED display will light up when the «ON-OFF» switch is pressed.

«ON-OFF» switch

- The «ON-OFF» switch can be used at any time to switch the machine on and off.
- If the machine is in ON condition and not being used, the electronics will switch to the OFF condition in 10 minutes.

5 Scope of application

The GENiUS hydraulic system is used as a crimping, cutting and punching tool. The original tools, as described here, are to be used.

Crimping: GENiUS crimping heads for 300 mm² and 185 mm² cable cross-sections
(CIMCO article no. 10 4301 and 10 4298)
Punching: GENiUS punching head
(CIMCO article no. 10 4308)
Cutting: GENiUS cutting head
(CIMCO article no. 10 4306)

Machines and parts are to be ordered through CIMCO Werkzeugfabrik!

6 Rechargeable battery

6.1 Rechargeable battery technology

The GENiUS hydraulic system is operated by Li-Ion rechargeable battery technology.

6.2 Type of battery

Only the original-Li-Ion 18V/1.6Ah rechargeable battery may be used.

6.3 Charging the battery

The battery may only be charged with the original charger. See operating instructions for the charger..

6.4 Safety information for Li-Ion rechargeable batteries

Please note the following safety information for the use of Li-Ion rechargeable batteries;

1. Do not crush!
2. Do not heat or burn!
3. Do not short-circuit!
4. Do not immerse in liquid!
5. Do not charge below 0°!
6. Only charge with the original charger!

6.5 Disposal of Li-Ion rechargeable batteries

The batteries must be disposed of in the same way as the hydraulic system (see Point 7.3).

7 Packaging, storage and disposal

7.1 Sensitivity

The hydraulic system and the charger must be protected from hard impact, wet, damp, dirt, dust, extreme cold, extreme heat, chemical solutions and gases

DThe hydraulic system has wide-ranging EMC protection. If however electromagnetic waves should on occasion switch the tool off, remove the battery from the holder. The fault will generally be corrected; if not, the interfering sources must be removed.

7.2 Packaging and temporary storage

The appliance is supplied in a plastic case.

If the hydraulic system is not in use, the battery must be removed, and both are to be stored temporarily in the case.

After a longer period of storage, the battery will only reach its full theoretical capacity after being fully charged 1-5 times.
If the hydraulic system is not put to use immediately after delivery, it should be stored in its original packaging in a dry place.

Store the hydraulic systems out of the reach of unauthorised persons in dry, lockable storage places!

Hydraulic systems that have not been used for a longer period of time (6 months or more) are to be dry-wiped clean. You should also check their functioning capacity on first use by carrying out the checks as in Point 8.2.

7.3 Disposal

For environmentally-friendly disposal, send the hydraulic system to your nearest
customer service point (see guarantee card for addresses) or pass it on to a recycling company. Hydraulic systems must not be disposed of as scrap or household waste.

8 Cleaning, monitoring, repairs, inspections

Before cleaning operations, always disconnect the machine from the mains or remove the battery from the hydraulic system!

8.1 Regular cleaning after use

► Clean off dirt and metallic residues
from the heads using a solvent.

Never use fluids (water or chemicals) or damp cloths to clean the hydraulic system. The outside of the housing can be cleaned by wiping with a damp cloth (plastic parts).

8.2 Regular monitoring

Ensure that when crimping the cheek plates close completely.

After every use, monitor the geometry of the crimping inserts for damage or visible wear.

In the case of faults, contact an authorised customer service point (see guarantee card for addresses).

8.3 Faults / Fault correction

Faults: it may become difficult to insert the appropriate head into the machine due to contamination of the crimping, cutting or punching head or respectively the holder for the head.
Fault correction: clean dust and dirt off the crimping, cutting or punching head with a dry cloth and do the same for the head holder.

Do not carry out any repair works yourself, but pass repairs on to an authorised customer service point (for addresses, see guarantee card)

8.4 Inspection and maintenance

Perfect crimped connections require a well-functioning and regularly maintained hydraulic system. The hydraulic system should therefore be sent to the CIMCO Werkzeugfabrik for inspection and maintenance when the service display lights up.

The service display (green LED and yellow LED flash) automatically draws your attention to the need for maintenance after 30,000 pressings.

After 32,000 pressings, the GENiUS hydraulic tool will be locked by the electronic monitoring system(yellow LED is lit). It must be sent to an authorised customer service point for maintenance (see guarantee card for addresses).

If the machine is defective, the GENiUS-hydraulic tool will be blocked immediately by the electronic monitoring system and should be sent to a customer service point for inspection (it is essential to refer to Chapter 4.4).

9 Customer service

For CIMCO customer services, see the guarantee card.

10 EC Declaration of Conformity

We as producers of the machine declare that the machine named below conforms to the following listed directives and standards.

Name of appliance
GENiUS hydraulic system

Type of appliance
CIMCO article no. 10 4300

Directives
2006/42/EC, 2004/108/EC

Applicable standards
EN 60745-1:09 / EN 55014-1:06 + A1:09 + A2:11 / EN 62233:08 / EN 61000-6-2:05

Responsible for documentation
Arnd Diedrichs

Remscheid, 31.05.2012

CIMCO-Werkzeugfabrik - 42855 REMSCHEID

Joachim Quirl
Geschäftsführer

Producer

CIMCO-Werkzeugfabrik
Carl Jul. Müller GmbH & Co.KG

D - 42855 Remscheid

Hydrauliksystem GENIUS

Operating instructions

Original operating instructions

Crimping head 10 4301

1 Technical product data

Name:	Crimping head
Type:	10 4301
Max. pressing strength:	60 kN
Max. cable cross-section:	300 mm²
Dead weight:	1.5 kg.
Use:	exclusively in CIMCO GENiUS pressing tool

2 Description of crimping head

The 10 4301 crimping head forms part of the CIMCO pressing tool GENiUS.

3 Intended use

The 10 4301 crimping head is used for crimping connecting materials.

4 Residual risk

If the tool is used improperly, the operator may crush his/her fingers.

5 Functional principle

See from page 4 on

6 Safety information

See from page 2 on

7 Faults and fault correction

See page 13

8 EC Declaration of Conformity 8

We as producers of the product declare that the exchangeable item of of equipment named below conforms to the following directives listed.

Name of product
Crimping head

Type of appliance
CIMCO article no. 10 4301

Directive
2006/42 EC

Responsible for documentation
Arnd Diedrichs

Remscheid, 31.05.2012

CIMCO-Werkzeugfabrik - 42855 REMSCHEID

Joachim Quirl
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Producer

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Carl Jul. Müller GmbH & Co.KG

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Operating instructions

Original operating instructions

Crimping head 10 4298

1 Technical product data

Name:	Crimping head
Type:	10 4298
Max. pressing strength:	60 kN
Max. cable cross-section:	(for crimping use as per DIN 48086-6M)185 mm²
Dead weight:	1.5 kg.
Use:	exclusively in CIMCO GENiUS pressing tool

2 Description of crimping head

The 10 4298 crimping head forms part of the CIMCO pressing tool GENiUS.

3 Intended use

The 10 4298 crimping head is used for crimping connecting materials.

4 Residual risk

If the tool is used improperly, the operator may crush his/her fingers.

5 Functional principle

See from page 4 on

6 Safety information

See from page 2 on

7 Faults and fault correction

See page 13

8 EC Declaration of Conformity

We as producers of the product declare that the exchangeable item of of equipment named below conforms to the following directives listed.

Name of product
Crimping head

Type of appliance
CIMCO article no. 10 4298

Directive
2006/42 EC

Responsible for documentation
Arnd Diedrichs

Remscheid, 31.05.2012

CIMCO-Werkzeugfabrik - 42855 REMSCHEID

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Hydrauliksystem GENiUS

Operating instructions

Original operating instructions

Cutting head 10 4306

1 Technical product data

Name:	Cutting head
Type:	10 4306
Max. cutting strength:	60 kN
Max. cable diameter:	50 mm
Dead weight:	2.9 kg
Use:	exclusively in CIMCO GENiUS pressing tool

2 Description of cutting head

The 10 4306 cutting head forms part of the CIMCO pressing tool. GENiUS.

3 Intended use

The 10 4306 cutting head is used for cutting electrical cables.

4 Residual risk

If used improperly, the machine operator may cut his/her fingers.

5 Functional principle

See from page 4 on

6 Safety information

See from page 2 on

7 Faults and fault correction

See page 13

8 EC Declaration of Conformity

We as producers of the product declare that the exchangeable item of of equipment named below conforms to the following directives listed.

Name of product
Cutting head

Type of appliance
CIMCO article no. 10 4306

Directive
2006/42 EC

Responsible for documentation
Arnd Diedrichs

Remscheid, 31.05.2012

CIMCO-Werkzeugfabrik - 42855 REMSCHEID

Joachim Quirl
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Producer

CIMCO-Werkzeugfabrik
Carl Jul. Müller GmbH & Co.KG

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Operating instructions

Original operating instructions

Punching head 10 4308

1 Technical product data

Name:	Punching head
Type:	10 4308
Max. punching pressure:	60 kN
Max. punching area:	ISO63 or 92 x 92 mm
Dead weight:	1.6 kg
Use:	exclusively in CIMCO GENiUS pressing tool

2 Description of punching head

The 10 4308 punching head forms part of the CIMCO pressing tool. GENiUS.

3 Intended use

The 10 4308 punching head is used for punching sheet metal.

4 Residual risk

If the tool is used improperly, the operator may crush his/her fingers.

5 Functional principle

See from page 4 on

6 Safety information

See from page 2 on

7 Faults and fault correction

See page 13

8 EC Declaration of Conformity

We as producers of the product declare that the exchangeable item of of equipment named below conforms to the following directives listed.

Name of product
Punching head

Type of appliance
CIMCO article no. 10 4308

Directive
2006/42 EC

Responsible for documentation
Arnd Diedrichs

Remscheid, 31.05.2012

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