CWR

Printed Matter No. 9839 0035 01

Instrument for torque control

Valid from Serial No. A6730001
2017-01-10

Product Instructions

CWR

⚠ WARNING

Read all safety warnings and instructions
Failure to follow the safety warnings and instructions may result in electric shock, fire and/or serious injury.
Save all warnings and instructions for future reference

Atlas Copco

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Product information

General information

⚠

WARNING

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  Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.
- Save all warnings and instructions for future reference.

Safety signal words

The safety signal words Danger, Warning, Caution, and Notice have the following meanings:

DANGER	DANGER indicates a hazardous situation which, if not avoided, **will** result in death or serious injury.
WARNING	WARNING indicates a hazardous situation which, if not avoided, **could** result in death or serious injury.
CAUTION	CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
NOTICE	NOTICE is used to address practices not related to personal injury.

Warranty

Contact the Atlas Copco sales representative within your area to claim a product. Warranty will only be approved if the product has been installed, operated and overhauled according to the Operating Instructions.

Please also see the delivery conditions applied by the local Atlas Copco company.

ServAid

ServAid is a utility for providing updated product information concerning:

- Safety instructions

- Installation, Operation and Service instructions

- Exploded views

ServAid facilitates the ordering process of spare parts, service tools and accessories for the product of your choice. It is continuously updated with information of new and redesigned products.

You can use ServAid to present content in a specific language, provided that translations are available, and to display information about obsolete products. ServAid offers an advanced search functionality of our entire product range.

ServAid is available on DVD and on the web:

http://servaidweb.atlascopco.com

For further information contact your Atlas Copco sales representative or e-mail us at:

servaid.support@se.atlascopco.com

Dimensional drawings

For information about the dimensions of a product, see the Dimensional drawings archive:

http://webbox.atlascopco.com/webbox/dimdrw

Overview

Models

Ordering No	Model	Torque range [Nm]	Torque range [ft lb]
8439004100	CWR-20	03-20	2.2-14.8
8439004101	CWR-25	02-25	1.5-18.4
8439004102	CWR-50	05-50	3.7-37.0
8439004103	CWR-85	15-85	11.0-62.7
8439004104	CWR-120	50-120	37.0-88.5
8439004105	CWR-200	50-200	37.0-148.0
8439004106	CWR-300	60-300	44.2-221.0

Main components and functions

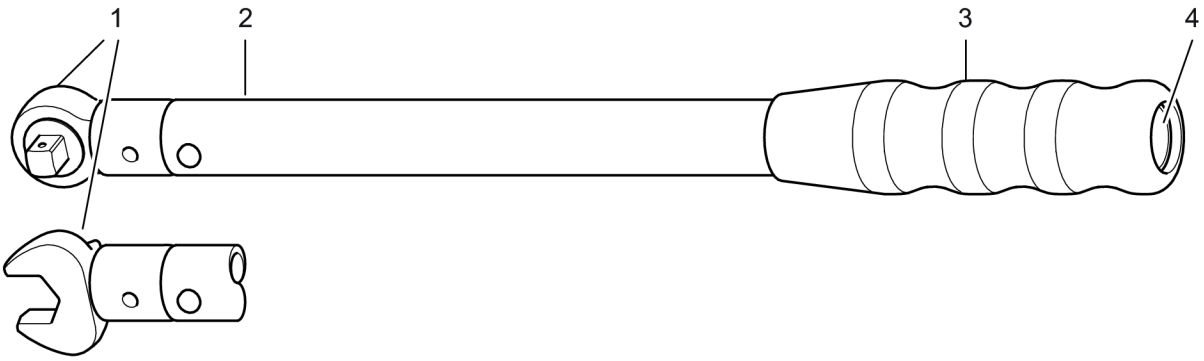
Mechanical torque wrenches of the CWR series are short-inducing torque wrenches with automatic trigger mechanism.

The achievement of the set value is clearly heard and felt.

The wrenches are available with scale (CWR-S) or without (CWR). The repeating accuracy is +/-4%.

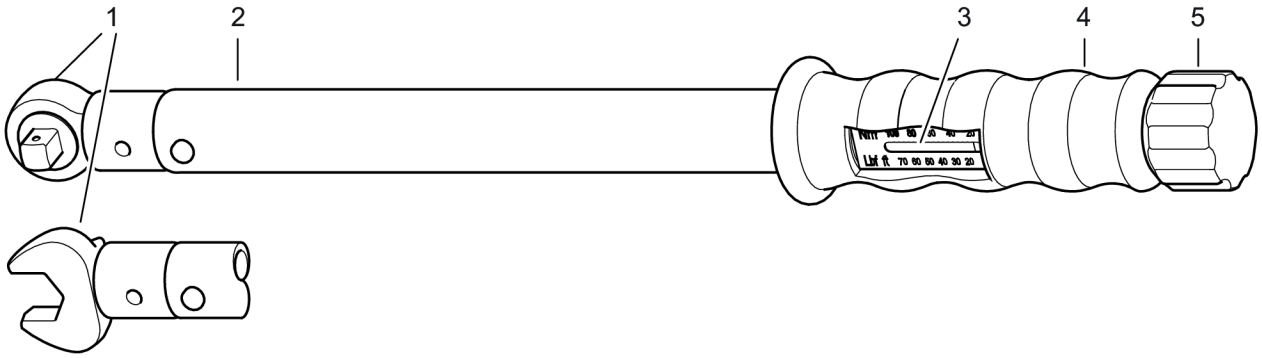
Torque values in the CWR-S models are adjusted by simply turning the control knob and using the scale.

Wrench without scale



1. End fitting
2. Wrench
3. Handle
4. Adjustment screw

Wrench with scale



1. End fitting
2. Wrench
3. Adjustment scale
4. Handle
5. Adjustment knob

Operation

Ergonomics

Ergonomic guidelines

Consider your workstation as you read through this list of general ergonomic guidelines and see if you can identify areas for improvement in posture, component placement, or work environment.

- Take frequent breaks and change work positions frequently.
- Adapt the workstation area to your needs and the work task.
  - Adjust for convenient reach range by determining where parts or tools should be located to avoid static load.
  - Use workstation equipment such as tables and chairs appropriate for the work task.
- Avoid work positions above shoulder level or with static holding during assembly operations.
  - When working above shoulder level, reduce the load on the static muscles by reducing the weight of the tool, using for example torque arms, hose reels or weight balancers. You can also reduce the load on the static muscles by holding the tool close to the body.
  - Make sure to take frequent breaks.
  - Avoid extreme arm or wrist postures, particularly for operations requiring a degree of force.
- Adjust for convenient field of vision by minimizing movement of the eyes and head during the work task.
- Use the appropriate lighting for the work task.
- Select the appropriate tool for the work task.
- Use ear protection equipment in noisy environments.
- Use high-quality inserted tools or consumables to minimize exposure to excessive levels of vibrations.
- Minimize exposure to reaction forces.
  - When using direct driven screw or nutrunners:
    Reaction forces depend on tool setting and joint characteristics. The ability to bear reaction forces depends on the operator’s strength and posture. Adapt the torque setting to the operator's strength and posture and use a torque arm or reaction bar if the torque is too high.
- Use dust extraction system or mouth protection mask in dusty environments.

Configuration

Attaching the end fitting

Attach the end fitting into the tool. For normal tightening (clockwise), make sure the text on the tool is facing upwards.

For counter-clockwise tightening, use the narrow tip on the alignment tool to remove the insert. Then attach the insert with the text on the tool facing downwards.

Adjusting the torque on a wrench without scale

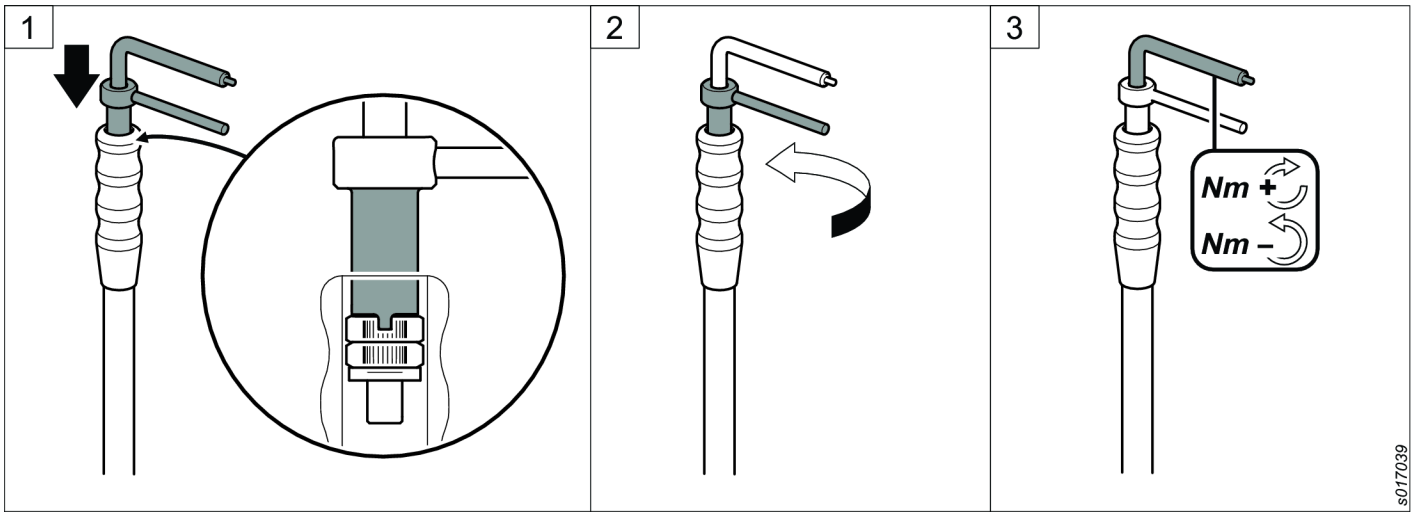
To set the wrench to the desired torque, a suitable equipment should be used.

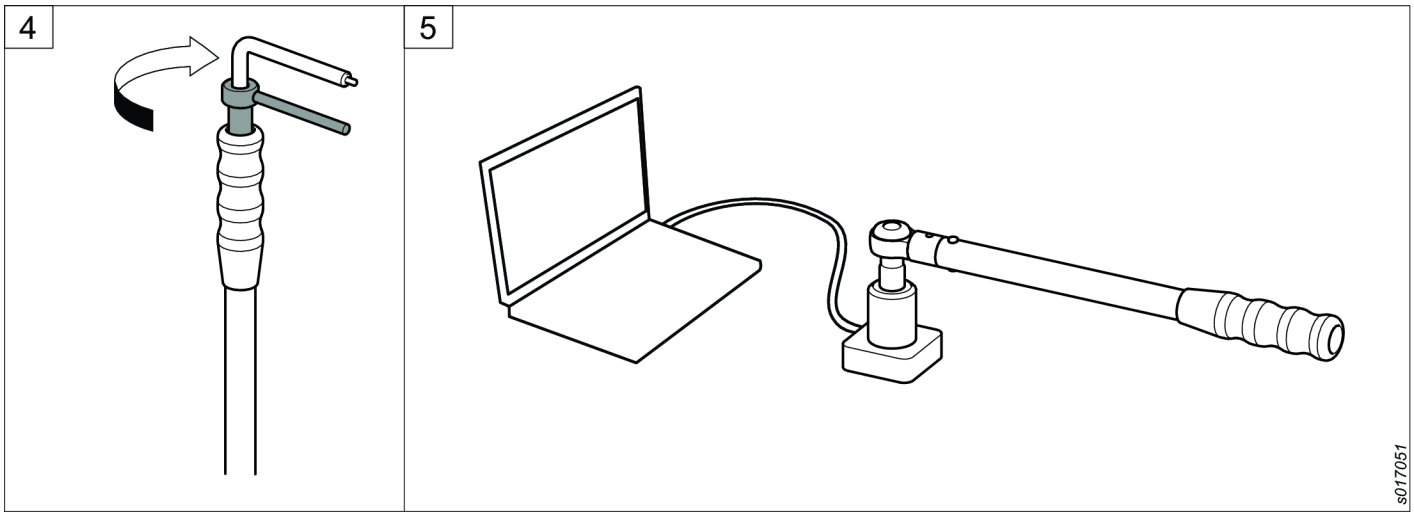
After setting, five test tightenings shall be performed before starting work.

1. Insert the settings key into the tool handle.

   If you do not have a setting key, you can order it as an accessory.
2. Release the lock nut.
3. Turn the adjusting nut clockwise to increase, or counter-clockwise to decrease the torque.
4. Hold the adjusting nut while tightening the lock nut.
5. Test the setting.

Repeat the process if necessary.





Adjusting the torque on a wrench with scale

Set the desired torque value by turning the adjustment knob according to the reading on the scale.

Operating instructions

Torque wrenches are quality instruments and require a correspondingly careful and gentle treatment to obtain functionality and accuracy. To increase the service life, it is recommended to reset torque wrench to the lowest setting in order to relieve the built-in spring.

Tightening

- The screw should be tightened in even strokes.
- The closing speed should be chosen so that when triggered an immediate interruption of the tightening process is possible.
- The operation of the torque wrench must be carried out by the handle.
- The force should be one-handed, uniform, parallel and applied in the last phase without interruption until the tool trips.
- The achievement of the set value is clearly seen and felt.

NOTICE After the automatic release, the wrench must not be moved further!

Service

Maintenance

Preventive maintenance

NOTICE Cleaning of the wrench must not be done using solvents.
Solvents may influence lubrication of the moving parts thus interfere with the proper function of the wrench and increase wear.

Further maintenance (once per year or every 5,000 tightenings), the wrench should be lubricated, see *Cleaning and lubricating [page 000]*.

Checking

The mechanical parts of the wrench are subject to normal wear and use. It is therefore necessary to check the setting of the wrench at regular intervals, using a suitable torque tester.

1. Set the wrench to the desired value.
2. Use the tester determine the actual value.
3. Record a possible difference between set point and actual value.

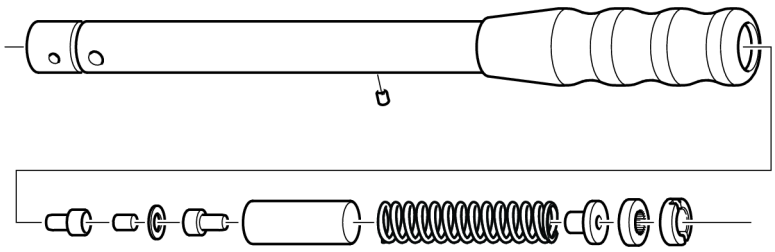
   The tester set points must not exceed +/-4%) deviation from the value set on the wrench. If the limit is exceeded, readjustment of the wrench is required.

Cleaning and lubricating

The following disassembly and assembly steps are mandatory:

1. Unscrew the locking screw and adjusting nut.
2. Slide the thrust hub and spring out of the tube by slanting the tool slightly.
   NOTICE Loose items!
3. Clean contaminated parts gently.
4. Lubricate the contact surfaces with bearing grease.
5. Assemble removed parts in reverse order.
6. Mount the adjusting nut and locking screw.
7. Calibrate the tool.

Wrench without scale



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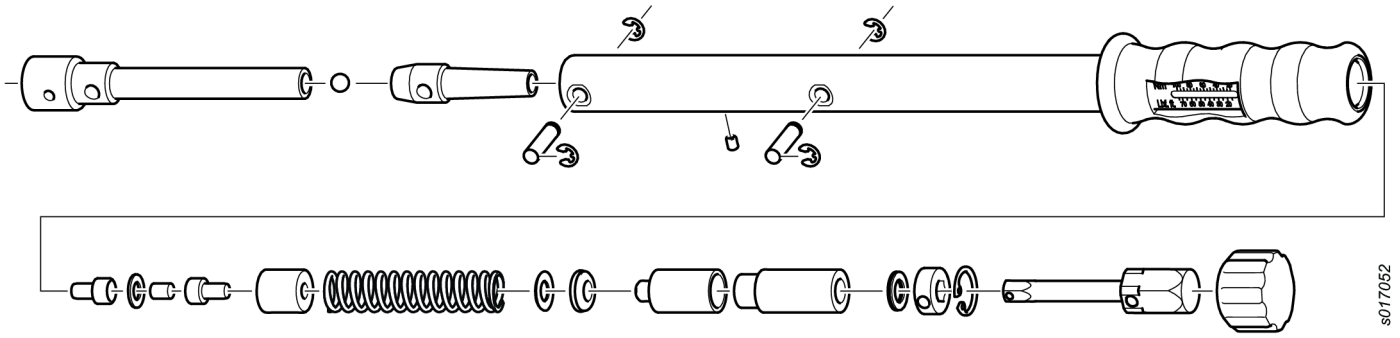
Wrench with scale



Re-adjusting wrenches with scale

For readjustment, the wrench must be dismantled. Also adjustment shims are needed.

1. Remove the protection screw.
2. Unscrew the adjusting screw.
3. • If the tool reading is lower than the target value, add shims between the spring and the scale sleeve.
   • If the tool reading is higher than the target value, remove shims between the spring and the scale sleeve.

   NOTICE Loose items!
4. Mount the adjusting nut and locking screw.
5. Calibrate the tool.
6. Attach the protection screw.

Original instructions

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