

THE MOST COMMON ERRORS WHEN USING TORQUE WRENCHES

And how they can be prevented with eClick.

Why good tools on their own are not enough

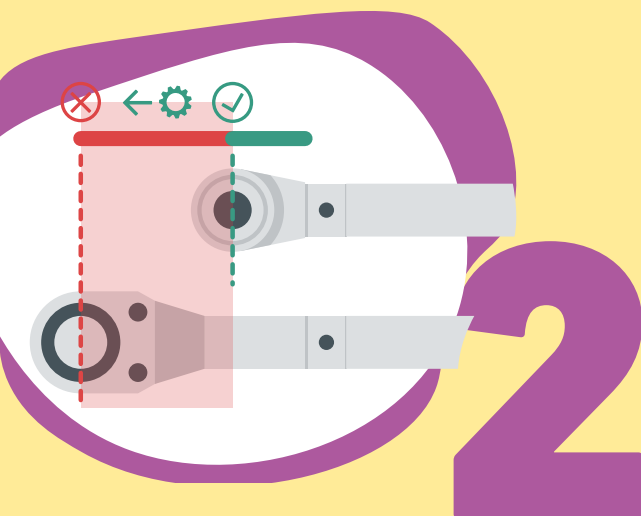
Torque wrenches are considered a guarantee of precise and reliable bolted joints. And for good reason, as high-quality mechanical models deliver very reliable results – if they are configured correctly, used properly, and calibrated regularly. In practice, the biggest source of errors is often not due to the tool itself, but rather how it is used. The most common errors include:

Continued load following click (double click)

The click signal is not always clear. It is not always possible for the user to stop applying a load immediately after the click, resulting in a load being applied to the bolt that is in excess of the required tightening torque. This effect is often intensified by the so-called 'double click' – repeated clicking in the assumption that this secures the bolted joint. In fact, every additional click can increase the torque applied and result in an impermissible overload of the bolted connection.

Watch video:

Why multiple clicks are risky – and how eClick provides protection



No or incorrect extension length correction

If insert tools with a different extension length are used on the torque wrench, the effective force loading point changes. This results in the torque actually applied deviating from the target value, which has a direct impact on the quality and reliability of the bolted joint. In this case, a so-called extension length correction is required. This means that the setting value has to be adjusted using calculations to achieve the desired torque.

Watch video:

Correctly taking the extension length into consideration – automatic with eClick

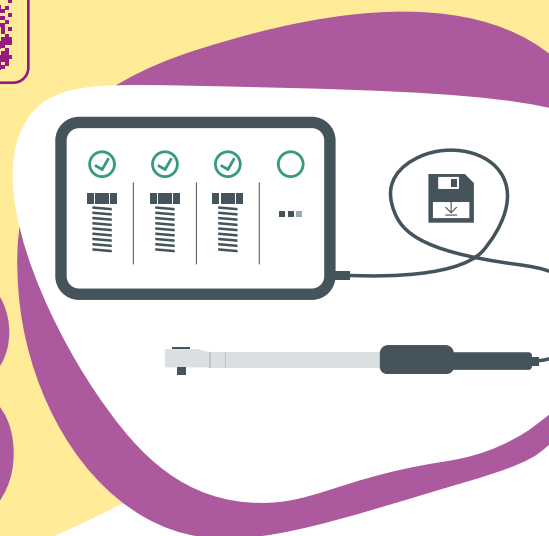


Manual sequence plans and documentation

If bolting sequences, target values, or tightening torques are manually set and documented, this often results in errors due to incorrect sequences, work steps being forgotten, typing errors, or entries being missed altogether. This results in deviations from the target value, limited reproducibility, and incomplete evidence in the event of a complaint.

Watch video:

More than just a click – true torque documentation

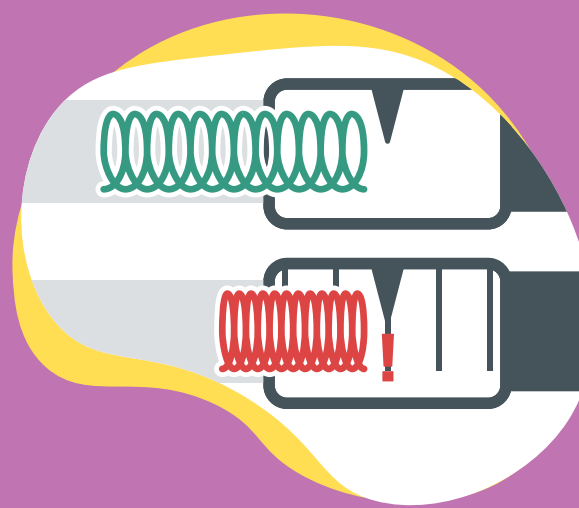
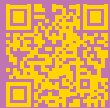


Spring not released after use

In the case of mechanical torque wrenches with a spring mechanism, a spring is pretensioned when the target torque is set. It has to be released again after use by resetting the wrench to the lowest value. Otherwise, the spring is permanently compressed. This can result in temporary deformation and negatively impact the measurement accuracy during subsequent use.

Watch video:

Why the spring should be unwound after use, and why this is unnecessary with the eClick.

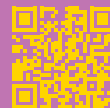


Incorrect force application point

A common, yet serious error is caused if the torque wrench is not held at the intended grip position. By changing the force application point, the bolted joint is either overtightened or not tightened enough. This often goes undetected, with potential consequences for the object being bolted and the connection.

Watch video:

Correct force application point and automatic compensation with eClick.

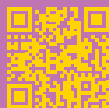


Torque incorrectly set

On mechanical torque wrenches, scales or markings on the handle are usually used to adjust the target torque. They are not always easy to read. Particularly when viewed from the side, this can result in so-called parallax errors, causing an incorrect value to be set. Inaccurate markings or hard-to-read scales also make incorrect settings more likely and subsequently result in incorrect bolted connections.

Watch video:

Precise adjustment without reading errors.



Consistent solution for increased process reliability

The errors described clearly show that even high-quality mechanical torque wrenches only provide reliable results if they are used correctly. However, in practice, human operating errors repeatedly cause deviations in the tightening torque, a lack of traceability, and preventable quality risks.

The eClick torque tools from STAHLWILLE specifically reduce these typical sources of errors, as digital measurement, bolted joint evaluation, and actual values, that can be documented, make bolt tightening more transparent and reproducible. At the same time, the trusted, mechanical click signal is retained, providing durable, fast work processes in day-to-day production. This results in reliable bolted joints with measurable quality and seamless documentation.

STAHLWILLE Eduard Wille GmbH · Lindentallee 27 · 42349 Wuppertal · Germany
Tel.: +49 202 4791-0 · info@stahlwille.de · www.stahlwille.com

© STAHLWILLE Eduard Wille GmbH // 1-03-26 BMD // V 1.0 // 91972273
Subject to technical changes and errors. No liability for printing errors.

