

Operating instruction for torque wrenches type:

DEU – 00/1
DEU – 00
DEU – 10/1
DEU – 10
DEU – 20/1
DEU – 20



Date of edition: 01.05.2011
Stage of alteration: 1

Please keep this for future use!

Contents:

1 Safety instructions..... 3

2 Determined use..... 3

3 Technical Data..... 5

3.1 Scope of delivery..... 6

4 Handling 7

5 Storage when not in use 9

Warning signs, symbols

This operating instruction uses the following symbols:



Marks special instructions, rules and prohibitions which are important in order to avoid any damage.

Please observe these instructions!



Marks application instructions and other useful information.



Please read the operating manual carefully in order to guarantee the proper and safe use of the torque wrench.

Please retain this operating manual for the future use.

1 Safety instructions

- Make sure the handles of the torque wrench are free of oil or grease. Hands slipping from the handle while tightening could lead to injuries.
- Make sure there is enough room to work in to avoid injuries.
- Check the torque wrench for cracks, scratches and rust. If those exist, have a functional test carried out and repair if necessary.
- Use the torque wrench over-head to make sure that it cannot drop and cause injuries or damages.
- Do not drop the torque wrench or use it as a hammer. Both could cause damage or effect the calibration.
→ Protect the wrench against impacts and / or beats.
- Do not use if any parts are missing.
- Do not carry out any changes in the set-up of the torque wrench. This may cause errors in accuracy, as well as, cause an accident or injury.
- If a repair is necessary use only genuine parts.
- Always keep the torque wrench clean; remove any dirt after each use.
- Protect the torque wrench from moisture. Do not use the torque wrench under water.
- Do not make the torque wrench stand its grip end. It may drop and cause an injury or damage.

2 Determined use

- Do not use the torque wrench for any other purpose than to tighten screws or bolts.
- Do not use the torque wrench beyond the maximum measuring range; measuring range see Table 1, page 5.

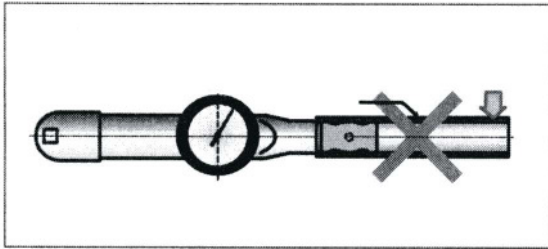


Please make sure to use the appropriate wrench for the torque to be measured.

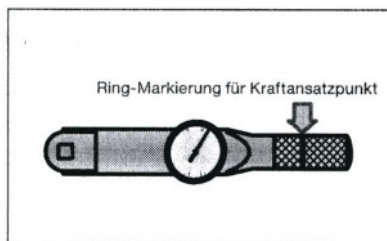
Do not use loosen rusty and / or corroded screw fittings as the tool may be overloaded..

- Ensure the correct adapters are used, size and adaptation see Table 1, page 5.
- Do not reduce the square adaptation on the torque wrench by using adapter.

- Do not lengthen the handles by using additional aids eg plug the handle into a pipe. This may damage the torque wrench and/or disturb the calibration.



- Only activate the torque wrench at the handle. A marking at the handle shows the position where the force appears.



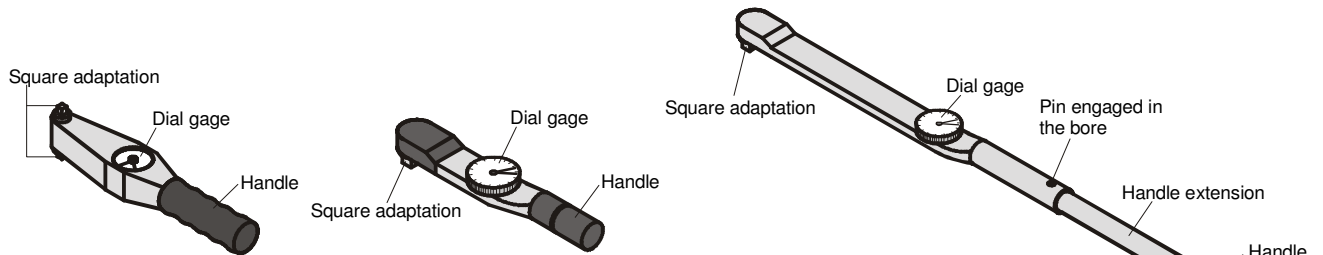
- Only pull and push the handle smoothly, never jerkily.

The non-determined use exempts the manufacturer from any liability!

3 Technical Data

The following types of torque wrenches are available:

A) One-armed torque wrench (Type „A“)

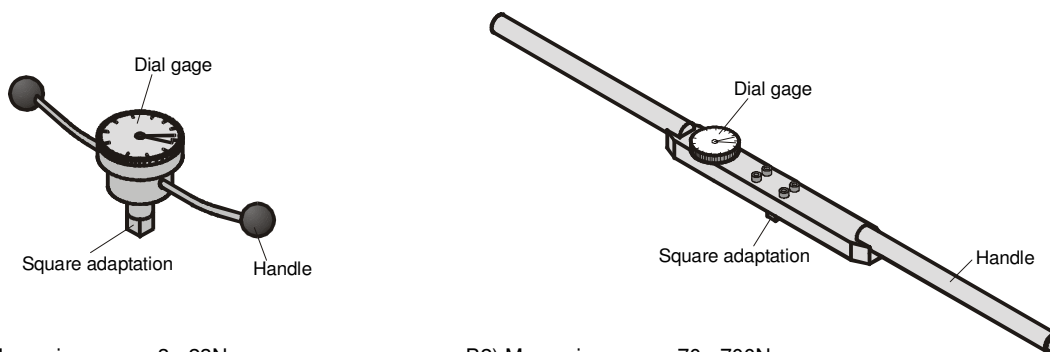


A1) Measuring range: 0,3 - 4Nm

A2) Measuring range: 3 - 25Nm
20 - 200Nm

A3) Measuring range: 70 - 700Nm

B) Two-armed torque wrench (Type „B“)

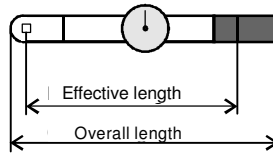


B1) Measuring range: 3 - 23Nm
20 - 180Nm

B2) Measuring range: 70 - 700Nm

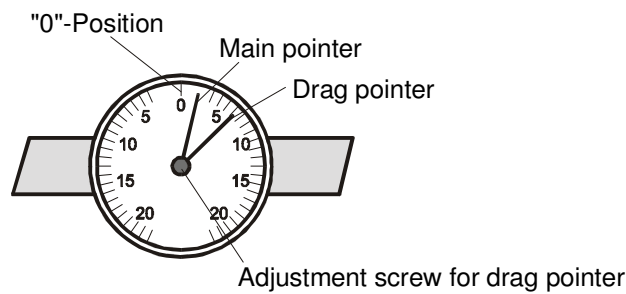
Table 1: Technical data of the torque wrenches

Type	For adapter size	Model	Torque range [Nm]	Measuring range	Effective length [mm]	Overall length [mm]	Square adaptation [inch]
DEU-00/1	00	A	0,3 - 4	M2 – M6 (No.2 – 12)	190	250	1/4
DEU-00/1 DEU-00	00/01(03)	A B	3 - 25 3 - 23	M6 – M12 (No.10 – 7/16)	200 180	245 205	3/8
DEU-10/1 DEU-10	03/04	A B	20 - 200 20 - 180	M12 – M27 (7/16 – 1“)	410 620	500 656	1/2
DEU-20/1 DEU-20	04/05	A B	70 - 700	M24 – M52 (7/8 – 1 3/4)	1150	1260 1300	3/4



3.1 Scope of delivery

The torque wrenches are equipped with a main pointer and a drag pointer. During measuring the drag pointer follows the main pointer and stops at the maximum torque.



All torque wrenches, except type A1 with torque range 0,3-4Nm, can be used in both turning directions.

The delivery contains an intermediate piece, suitable for the square adaptation of the torque wrench and for the square bolts for the appropriate adapter size. For further data regarding the square bolts and further tools required for the adjustment of the overload clutch at EM-U and EM-UL adapters please refer to the appropriate operating instruction, furthermore data for adjustment.

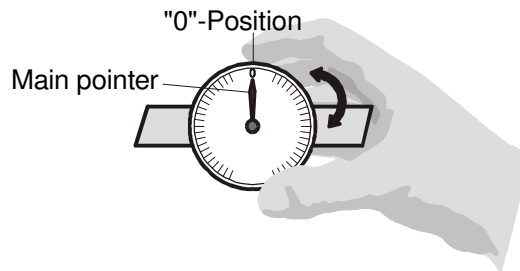
4 Handling

Type A3 with torque range 70-700Nm:

- First push the handle extension in the holding pipe of the torque wrench. Make sure the pin of the handle extension engages in the bore of the torque wrench.

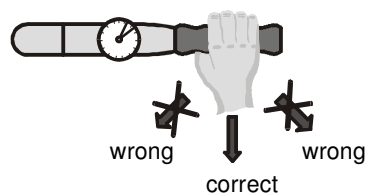
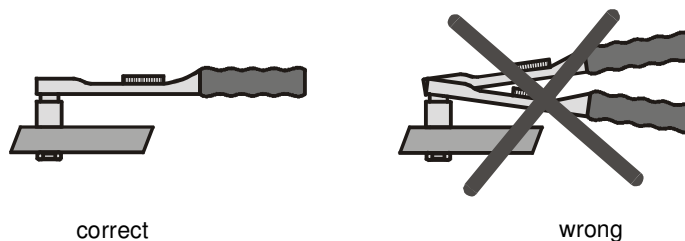
All types:

- Adjust main pointer to „0“ by twisting the scale at the housing until the main pointer is flush with the „0“-position of the scale.




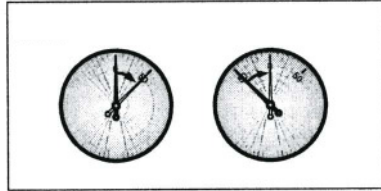
- Adjust drag pointer to „0“ against the measuring direction.
- Put the according intermediate piece and/or socket wrench onto the square adaptation of the torque wrench.
- Put the torque wrench with the intermediate piece on the square pin.
- Measure the torque. The starting tightening power must be introduced at the marking, see picture.

- ⚠ The load direction must be in right angle against the torque wrench, in horizontal and vertical direction (tolerance $\pm 15^\circ$)




- ⚠ Make sure there is enough clearance for your hand and elbow using to prevent injury.

-  The measurement may also be executed by first adjusting the main pointer to the required torque (by twisting of the scale). If the main pointer is flush with the “0”-position during measurement, then the required torque is adjusted.



5 Storage when not in use

If the torque wrench is taken out of service for a longer period, please go through the following steps:

- Unload the torque wrench
- Clean the torque wrench, ie with a duster from any dirt just like dust, chips, oil, coolant
-  Do not use any aggressive solvents
- Spray the torque wrench with a protection oil
- Store the torque wrench at a dry place

