

# ZAKRĘTARKI DYNAMOMETRYCZNE



AKUMULATOROWA  
ZAKRĘTARKA  
DYNAMOMETRYCZNA Z  
KOŁOROWYM WYŚWIELACZEM

**LDA/LAW SOLUTION**  
AŻ DO 8000 Nm



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Szanowni Klienci,  
Partnerzy biznesowi,  
i użytkownicy narzędzi,

GEDORE Torque Solutions GmbH to nowoczesne centrum rozwoju innowacyjnych produktów i indywidualnych rozwiązań w dziedzinie technologii połączeń śrubowych. Od 2008 roku firma jest częścią Grupy GEDORE, a od 2016 roku działa pod nazwą GEDORE Torque Solutions.











Własny dział inżynieryjny, zakres produkcji znacznie przekraczający 90% na najnowocześniejszych maszynach i doskonały serwis są gwarancją Made in Germany.

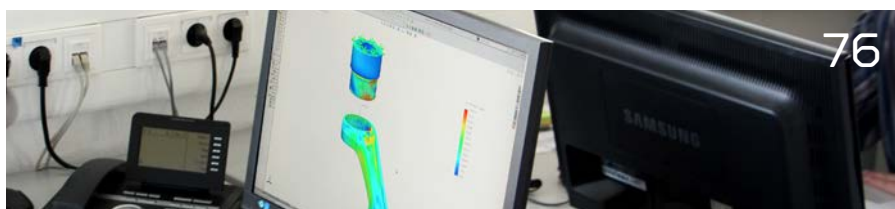
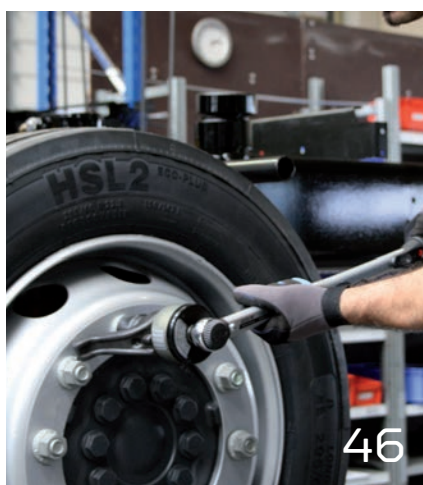
Nasz sprawdzony akumulatorowy klucz dynamometryczny o wysokim momencie obrotowym jest teraz dostępny również z kolorowym wyświetlaczem czytelnym w pełnym słońcu. Rozwiązanie LDA to niezawodny partner w zakresie połączeń śrubowych wymagających dokumentacji.

Firma GEDORE Torque Solutions opracowała serię maszyn do zasuw, specjalnie do montażu zasuw. Maszyny zasuwowe są dostępne z różnymi akcesoriami i są zasilane elektrycznie lub akumulatorowo. Informacje na temat naszych maszyn zasuwowych dostępne są od strony 64.

Mamy nadzieję, że przeglądanie nowego katalogu będzie dla Państwa przyjemnością.

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1. Gang		2. Gang	
1	1086 Nm	1	440 Nm
2	1383 Nm	2	508 Nm
3	1884 Nm	3	611 Nm
4	2242 Nm	4	808 Nm
5	2704 Nm	5	930 Nm
6	2770 Nm	6	1062 Nm
7	3188 Nm	7	1145 Nm

# GDA SOLUTION, GDA LDA/LAW SOLUTION, LDA/LAW CORDLESS TORQUE WRENCH



## GDA SOLUTION, GDA SCOPE OF DELIVERY



- › URZĄDZENIE
- › RAMIĘ REAKCYJNE
- › 2 AKUMULATORY
- › ŁADOWARKA
- › WALIZKA
- › INSTRUKCJA OBSŁUGI
- › CERTYFIKAT
- › KALIBRACJI
- › FABRYCZNEJ



## LDA/LAW SOLUTION SCOPE OF DELIVERY



- › URZĄDZENIE
- › RAMIĘ REAKCYJNE
- › 3 AKUMULATORY
- › ŁADOWARKA
- › PRZYBÓRNIK
- › INSTRUKCJA OBSŁUGI
- › CERTYFIKAT
- › KALIBRACJI
- › FABRYCZNEJ



## LDA/LAW SCOPE OF DELIVERY



- › DEVICE
- › REACTION ARM CRANKED
- › 3 BATTERIES
- › CHARGER
- › TOOL BOX
- › OPERATING MANUAL
- › FACTORY CALIBRATION
- CERTIFICATE



# THE COMPACT CORDLESS TORQUE WRENCH WITH COLOUR DISPLAY

GDA SOLUTION SERIES, 70 - 250 Nm



## Precision

Torque accuracy better than  
+/- 3% for the same bolt connection



## Low-maintenance modern control system

Brushless Technology



## Documentation

Documentation of over 10.000 bolted connections and pre-defining of different bolting operations with the module DOCU (optional)



## Automatic device switch-off

Own microprocessor-controlled switch-off electronics. Automatic switch-off of the device when torque is achieved. Wrench slacken (back off) after torque is applied

USB interface  
for data transmission



## Display

Sunlight-readable colour display.  
Continuously adjustable torque from  
70 - 250 Nm



## Battery performance

powerful 90 Wh (18V/5Ah)  
lithium-ion battery



## Individual factory calibration certificate



SPECIAL CALIBRATION  
UP TO 300 NM OPTIONAL

## The Compact Solution for Low Torque Range

With the new GDA Solution we present our smallest cordless torque wrench for use in assembly, production and manufacturing. The heart of the cordless torque wrench is the switch-off electronics with microprocessor control. This allows the tightening torque for each bolting operation to be precisely maintained and ensures stable torque accuracy over the entire discharging cycle of the battery. With a repeatability of +/-3%, in 1st gear, the torque is continuously adjustable. The 2nd gear can be used as a non-torque-accurate high-speed gear. This is quality made in Germany.



More information about  
documentation modules  
see page 54/55

DOCU documentation module  
for quality assurance

With the TRACK module, bolting processes can be traced back. During the bolt tightening process the data is documented and then exported to a PC. From there, a bolting protocol can be created and archived. This reliably documents that all bolt connections have been tightened with the specified settings. The encrypted log file ensures that manipulation of the documentation data is impossible. The TRACK and QS modules enable the documentation of more than 10,000 bolted joints and serve for quality assurance and archiving of your completed bolting work. The QS module can be switched on and off as required with password protection.

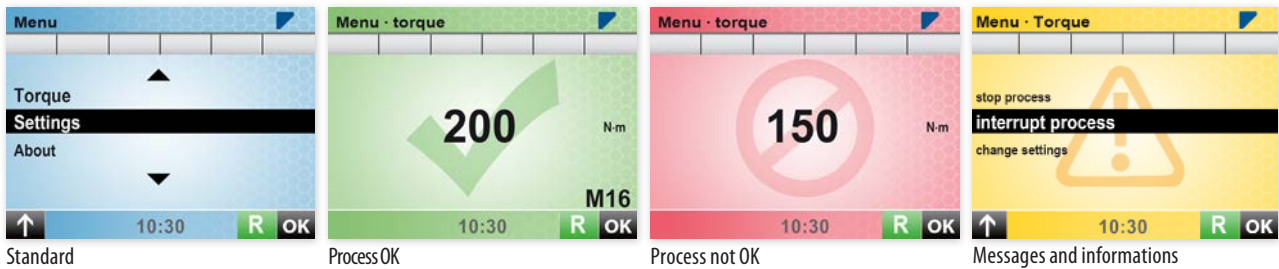


Optional bolting software and documentation module DOCU

With the documentation module DOCU the documentation of over 10,000 bolt connections is possible. It also serves for quality assurance archiving of your completed bolting work. The data transfer of all bolt tightening operations via USB interface at the end of the working day is flawless and complete with the GDA Solution. An integrated counting mode for life and maintenance cycle reminds you of service and recalibration.

Reliable system operation via digital colour display

For maximum precision, the GDA Solution offers a visual and acoustic zero-defects strategy: a sunlight-readable, digital colour display visualises the entire work workflow; in addition, an acoustics signal sound as soon as the set value is reached. The menu language can be set optionally (German or English).



Technical Data

Type	N-m min <sup>*1</sup> /max <sup>*2</sup>	lbf-ft min <sup>*1</sup> /max <sup>*2</sup>	~ U/min	■	Ø D mm	H mm	kg	
GDA Solution	70-250 <sup>*3</sup>	52-184	54	1/2"	63	260	3.0	

<sup>\*1</sup>Lowest torque in 2nd gear <sup>\*2</sup>Maximum torque in 1st gear <sup>\*3</sup>Special calibration up to 300 Nm, optional. Calibration only in 1st gear.  
\* With lithium-ion battery (740g), without reaction arm and impact socket    Vibration is less than 2.5 m/s<sup>2</sup>  
Continuous sound pressure level corresponding to < 78.7 dB (A)    All rights reserved. Subject to modifications without prior notice.

Scope of delivery

- › Device
- › Reaction arm, cranked, made of folded and high-strength sheet steel
- › 2x Lithium-ion battery (90 Wh/18 V/5 Ah)
- › Charger 220–240 V; 50/60 Hz
- › Tool box
- › Operation manual
- › Factory calibration certificate



Optional accessories

- › Various attachments
- › Special calibration up to 300 Nm
- › Car charger for 12V connection
- › Charger with 110-120 V; 50/60 Hz
- › Module LA.DOCU
- › Silicone protection cover display unit



# THE ASSEMBLY CORDLESS TORQUE WRENCH

## GDA SERIES, 60-200 Nm

Own microprocessor  
controlled switch-off electronics

Powerful 90 Wh (18 V/5 Ah)  
lithium-Ion battery

Brushless Technology  
low-maintenance

Torque values  
readable on the label

Ergonomic grip microtexture over-  
mould for safe & non-fatiguing use

Stepless variable adjustable

Repeatability +/- 3 %

Automatic device switch-off when torque  
achieved. Wrench slackens (back off)  
after torque is applied

With LED status signal



Individual GEDORE factory  
calibration certificate

SPECIAL CALIBRATION  
UP TO 300 NM OPTIONAL

The compact cordless torque wrench  
up to 200 Nm

The compact solution for low torque range.

With the new GDA we present our smallest cordless torque wrench  
for use in assembly, production and manufacturing.



The heart of the cordless torque wrench is the switch-off electronics with  
microprocessor control. This allows the tightening torque for each bolting  
operation to be precisely maintained and ensures stable torque accuracy  
over the entire discharging cycle of the battery.

With a repeatability of +/- 3%, the torque is steplessly adjustable and the  
status of the bolted connection is visualised via the LED status signal.



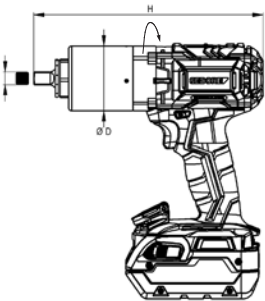
Flexible use in various industries

The new GDA is the solution for small bolting cases in a wide range of  
applications. Thanks to its low weight, ergonomic design and size, it is perfect  
for all assembly work in the low torque range. Small, compact and battery  
operated, it can be used wherever torque accurate bolting is required. Also for  
applications in linear guidance.

A perfect combination

Battery technology and microprocessor electronics complement each other per-  
fectly. Our microprocessor electronics increase and regulate the battery voltage.  
Thus, the battery life is extended and the torque is maintained during the entire  
Working cycle kept constant.

Technical Data

Typ	N-m min <sup>*1</sup> /max <sup>*2</sup>	lbf-ft min <sup>*1</sup> /max <sup>*2</sup>	~ U/min	■	Ø D mm	H mm	kg <sup>*3</sup>	
GDA	60-200	44-148	54	1/2"	63	221	2.9	
<sup>*1</sup> Lowest torque in 2nd gear <sup>*2</sup> Maximum torque in 1st gear <sup>*3</sup> Without reaction arm with battery      Battery: 740g Vibration is less than 2.5 m/s <sup>2</sup> Continuous sound pressure level corresponding to <78,7 dB (A) Further torque ranges on request. All rights reserved. Subject to modifications without prior notice.								

Scope of Delivery

- › Device
- › Reaction arm, cranked, made of folded and high-strength sheet steel
- › 2x Lithium-ion battery (90 Wh/18 V/5 Ah)
- › Charger 220-240 V; 50/60 Hz or 110-120 V; 50/60 Hz
- › Tool box
- › Operating manual
- › Factory calibration certificate



Optional Accessories

- › Various attachments
- › Special calibration up to 300 Nm







### The new cordless torque wrench with documentation module

The new cordless torque wrench LDA/LAW Solution, is equipped with a documentation module for quality assurance and a sunlight-readable, intuitively operated colour display. Pre-defining of different bolting operations with module DOCU is possible.

With its powerful 90 Wh lithium-ion battery, microprocessor electronics and brush-less technology, the LDA/LAW Solution has a torque range up to 6000 Nm. With the torque rotation angle controlled torque tightening process, perfectly defined bolted connections according to the highest quality standards are guaranteed.

### Conforms to the highest standards

The data transfer of all bolt tightening operations via USB interface at the end of the working day is flawless and complete with the LDA Solution. An integrated counting mode for life and maintenance cycle reminds you of service and recalibration.

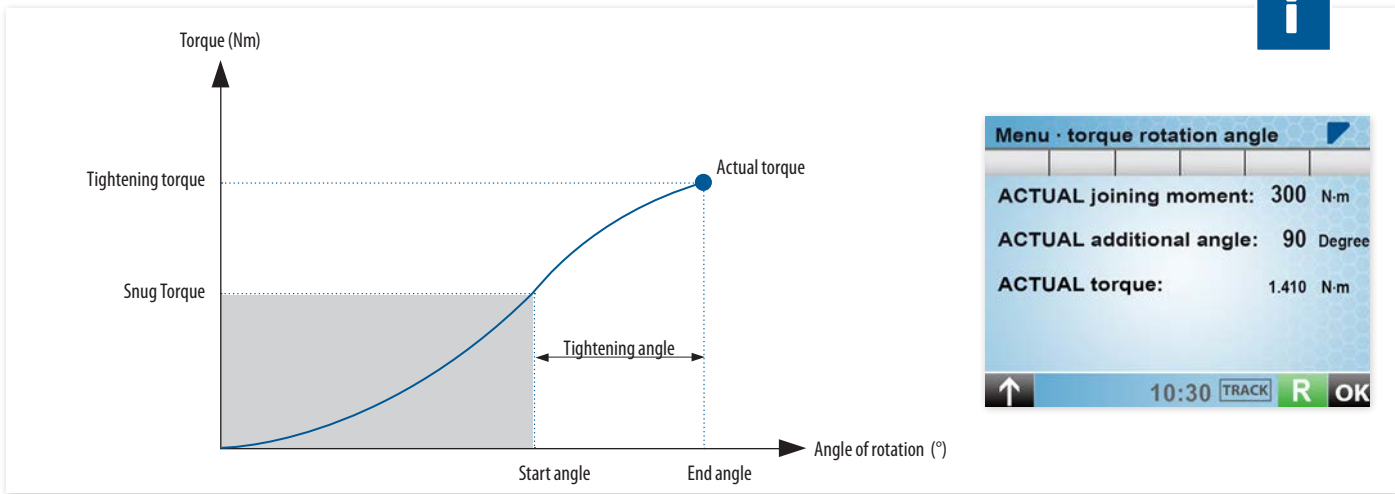
### Optional bolting software and documentation module DOCU

With the documentation module DOCU the documentation of over 10,000 bolt connections possible. It also serves for quality assurance archiving of your completed bolting work.

### Defined bolt connection with torque-angle controlled torque tightening

For a more precise tightening of the bolts, the LDA Solution offers the torque-angle torque tightening method. After the snug torque has been reached, the bolt is retightened by the previously determined further angle of rotation and thus guarantees a perfectly defined bolt connection according to the highest quality standards.

**>> More information about documentation modules**  
see page 54/55



Proven system sequence by means of digital color display

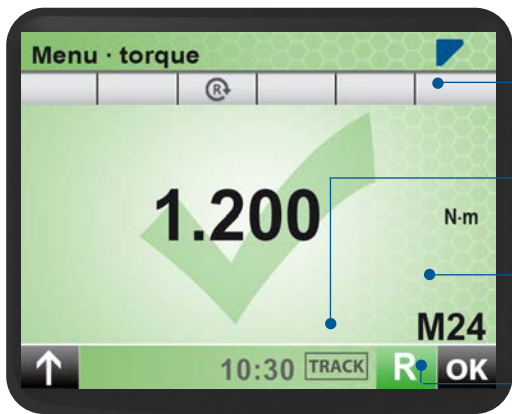
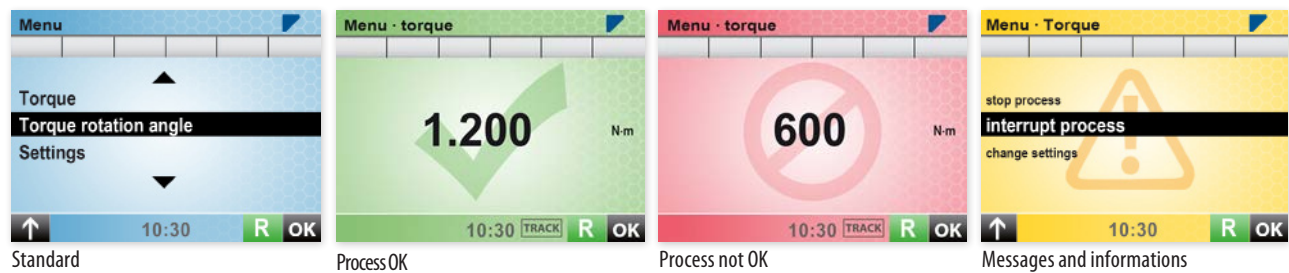
For maximum precision, the LDA Solution offers a visual and acoustic zero-defects strategy: a sunlight-readable, digital colour display visualises the entire work workflow; in addition, an acoustics signal sound as soon as the set value is reached. The menu language can be set optionally (German or English).

Lies comfortably in the hand

The ergonomic grip is non-slip and fatigue-free in the hand and ensures safe working. The 360° rotating drive unit prevents injuries to the operator when using in confined spaces.



The display and its functions:

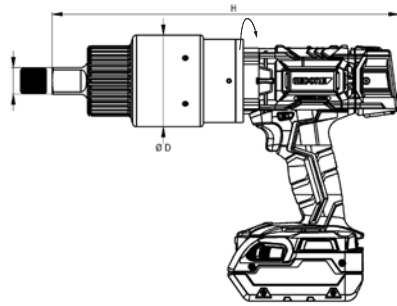


- + Toolbar shows status of the device (USB connection, thread direction, temperature)
- + Active module (TRACK or QS)
- + Typical bolt for adjusted torque
- + Direction of rotation

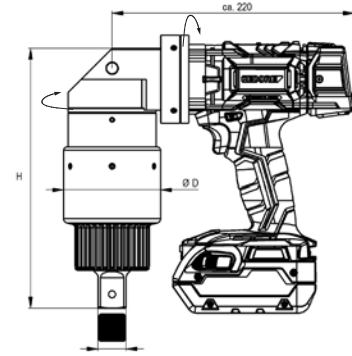


- + 2" high resolution LCD colour display with impact resistant macrolon protection screen
- + OK-button
- + Back-button
- + Setting wheel for easy Selection of bolt cases and torque values
- + USB-interface for data transmission

## Technical Data



LDA Solution series – straight version



LAW Solution series – angled version

Typ	N-m min <sup>*1</sup> / max <sup>*2</sup>	lbf-ft min <sup>*1</sup> / max <sup>*2</sup>	~ U/min	■	Ø D mm	H mm	kg <sup>*3</sup>
LDA-05 Solution	90 - 500	66 - 369	46	3/4"	80	294	3.4
LDA-07 Solution	120 - 700	86 - 516	29	3/4"	80	326	4.0
LDA-12 Solution	200 - 1.200	148 - 885	20	3/4"	80	326	4.0
LDA-15 Solution	250 - 1.500	184 - 1107	15	1"	88	342	5.1
LDA-22 Solution	300 - 2.200	221 - 1623	10	1"	90	360	5.7
LDA-32 Solution	400 - 3.200	290 - 2360	7	1"	88	383	6.2
LDA-40 Solution	500 - 4.000	369 - 2950	5,5	1"	88	383	6.2
LDA-60 Solution	700 - 6.000	516 - 4425	3,5	1 1/2"	102	398	7.9
LAW-12 Solution	200 - 1.200	148 - 885	20	3/4"	80	223	5.3
LAW-22 Solution	300 - 2.200	221 - 1623	10	1"	90	255	7.0
LAW-32 Solution	400 - 3.200	332 - 2360	7	1"	88	279	7.4
LAW-40 Solution	500 - 4.000	290 - 2360	5,5	1"	88	279	7.4
LAW-60 Solution	700 - 6.000	510 - 4425	3,5	1 1/2"	102	295	9.2

<sup>\*1</sup> Lowest torque in 2nd gear  
Vibration is less than 2.5 m/s<sup>2</sup>

<sup>\*2</sup> Maximum torque in 1st gear  
Continuous sound pressure level corresponding to < 78.7 dB (A)

<sup>\*3</sup> Without reaction arm with battery

Battery: 740g

Further torque ranges on request. All rights reserved. Subject to modifications without prior notice.



### Scope of delivery

- › Device
- › Handle (from LAW-60 Solution)
- › reaction arm, cranked, with lock on function\*  
made of chrome-vanadium steel
- › 3x Lithium-ion battery  
(90 Wh/18 V/5 Ah)
- › Charger  
220–240 V; 50/60 Hz or 110-120V; 50/60 Hz
- › Tool box
- › Operation manual
- › Factory calibration certificate

### Optional accessories

- › Reaction arm made of light alloy, straight with  
adjustable locking knob with movable square-end  
and retaining ring
- › Reaction ring for welding on
- › Car charger for 12 V connection
- › Function LA.M+a (fom construction size -12\*\*)
- › Module LA.DOCU
- › Silicone protection cover display unit



\*lock on function available for 3/4" and 1"

\*\*for LDA/LAW -12 Solution and -15 Solution function only possible in 1st gear



\*Illustration similar

# CORDLESS TORQUE WRENCH IN NEW GENERATION LDA/LAW SERIES, 90-6000 Nm

Microprocessor-controlled electronics with shut-off function

Brushless Technology low-maintenance

Torque values readable on the label

Automatic device switch-off when torque achieved. Wrench slackens (back off) after torque is applied

Individual GEDORE factory calibration certificate



System performance: 270 Wh powerful 90 Wh (18 V/5 Ah) lithium-ion battery

Ergonomic grip for safe & non-fatiguing use

Stepless torque adjustment

Repeatability +/- 3 %

With LED status signal

2 Gang		
Nm	1	440 Nm
Nm	2	508 Nm
Nm	3	611 Nm
Nm	4	808 Nm
Nm	5	929 Nm
Nm	6	1062 Nm
Nm	7	1145 Nm





LAW series



Take a look at our LDA-Video!

## The new cordless torque wrench up to 6000 Nm

Even more powerful, intelligent and flexible - and at the same time much smaller and lighter than its predecessor: The new generation of LDA cordless torque wrench with ergonomic grip and low-maintenance brushless technology. With our further developed and proven high level cordless torque wrench, bolting operations can be carried out independently and safely.

It generates torques of up to 6000 Nm with specially manufactured planetary gearboxes. The powerful lithium-ion battery mean that applications at high altitude or in confined spaces are easy overcome.



### Our secret: Intelligent microprocessor electronics

The heart of the cordless torque wrench is the switch-off electronics with microprocessor control. This allows the tightening torque for each bolting operation to be precisely maintained and ensures stable torque accuracy over the entire discharging cycle of the battery.

### Integrated gear protection and processor-controlled safety

The microprocessor prevents gear damage when loosening hard bolted connections. The low-backlash gear with a housing made of high-performance aluminium was specially developed further for this series. An active release function ensures that the wrench automatically releases after work is complete and can thus be easily removed from the bolt.

### An unbeatable combination

Battery technology and microprocessor electronics complement each other perfectly. Our microprocessor electronics increases and regulates the battery voltage. Thus, the battery life is extended and the torque kept constant during the operating cycle.

The scope of delivery of the cordless torque wrench includes a system performance of 270 Wh, consisting of three lithium-ion batteries (90 Wh/18 V/5 Ah).

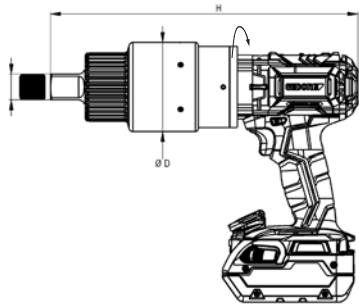
With the latest Brushless Technology, the LDA becomes even more efficient. The brushless motor replaces the brushed universal motor and thus requires less maintenance.

### Lies comfortably in the hand

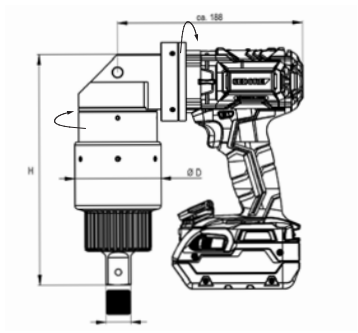
The ergonomic grip is non-slip and fatigue-proof in the hand and ensures safe working. The braked 360°-rotating drive unit prevents any injuries to the operator when used in confined spaces.



Technical data



LDA series – straight version



LAW series – angled version

Type	N·m min <sup>*1</sup> /max <sup>*2</sup>	lbf·ft min <sup>*1</sup> /max <sup>*2</sup>	~ U/min	■	Ø D mm	H mm	kg <sup>*3</sup>
LDA-05	90 - 500	60 - 370	46	3/4"	80	255	3.3
LDA-07	120 - 700	80 - 520	29	3/4"	80	287	3.9
LDA-12	200 - 1200	150 - 890	20	3/4"	80	287	3.9
LDA-15	250 - 1500	180 - 1110	15	1"	88	303	5.0
LDA-22	300 - 2200	220 - 1630	10	1"	90	321	5.6
LDA-32	400 - 3200	290 - 2360	7	1"	88	344	6.1
LDA-40	500 - 4000	370 - 2950	5,5	1"	88	344	6.1
LDA- 60	700 - 6000	510 - 4430	3,5	1 1/2"	102	359	7.8
LAW-12	200 - 1200	150 - 890	20	3/4"	80	223	5.2
LAW-22	300 - 2200	220 - 1630	10	1"	90	255	6.9
LAW-32	400 - 3200	290 - 2360	7	1"	88	279	7.3
LAW-40	500 - 4000	370 - 2950	5,5	1"	88	279	7.3
LAW-60	700 - 6000	510 - 4425	3,5	1 1/2"	102	295	9.1

<sup>\*1</sup>Lowest torque in 2nd gear  
Vibration is less than 2.5 m/s<sup>2</sup>  
Further torque ranges on request.

<sup>\*2</sup>Maximum torque in 1st gear  
Continuous sound pressure level corresponding to <78,7 dB (A)  
All rights reserved. Subject to modifications without prior notice.

<sup>\*3</sup>Without reaction arm with battery  
Battery: 740g



Scope of delivery

- › Device
- › Hand grip (from LAW-60)
- › Reaction arm cranked with lock on function\* made of chrome vanadium steel
- › 3x Lithium-ion battery (90 Wh/18 V/5 Ah)
- › Charger 220-240 V; 50/60 Hz or 110-120 V; 50/60 Hz
- › Tool box
- › Operating instructions
- › Factory calibration certificate



\*USA: Illustration similar

Optional accessories

- › Reaction arm made of light alloy, straight with adjustable locking knob with movable square-end and retaining ring
- › Reaction ring for bespoke reaction arm design
- › Car charger for 12 V connection

\*lock on function available for 3/4" and 1"



\*Illustration similar

# OUR TORQUE WRENCH IN DIFFERENT BOLTING SITUATIONS



## RWE POWER, HAMBACH OPENCAST MINE

In the Rhenish lignite mining area, complex pipeline systems criss-cross the opencast mines to provide drainage and immission control. Due to the progress of opencast mining, it is necessary to lay new drains at regular intervals and also to dismantle pipelines in targeted areas that are either recultivated or tipped over. In some areas, steel flange pipes are dismantled, which were used for drainage for more than 10 years and were buried in the soil. These pipes are often difficult to dismantle due to years of exposure to the elements and the resulting corrosion of the bolted connections.

During dismantling, the steel flanges are first exposed and cleaned. Then a working area is created in which the persons in charge of dismantling can move relatively freely. Forced postures are minimised in advance by the „stop before start“ safety tool used in opencast mining.

In order to ensure safe dismantling, taking into account health and safety at work, the nuts of the bolted connections are first loosened using the LDA-28 ST cordless high-torque wrench in straight form from GEDORE Torque Solutions or, for other space conditions, the LAW-28 ST angled cordless high-torque wrench, also from GEDORE Torque Solutions, and later removed using an air-operated impact wrench. This procedure optimises the vibration load in the hand-arm-shoulder area to the prescribed minimum values ( $<2.5\text{m/s}^2$ ). By substituting hand tools in this operation, we were able to achieve a positive side effect by reducing daytime noise exposure. With a sound pressure level of around 70 dB(A), the overall exposure at the workplace is positively influenced.



Source: RWE POWER, TAGEBAU HAMBACH



# LDE, LEW

## ELECTRIC TORQUE WRENCH

### LDE



### SCOPE OF DELIVERY

- › DEVICE
- › REACTION ARM CRANKED
- › TOOL BOX
- › OPERATING MANUAL
- › FACTORY CALIBRATION CERTIFICATE



### LEW



### SCOPE OF DELIVERY

- › DEVICE
- › REACTION ARM CRANKED
- › TOOL BOX
- › OPERATING MANUAL
- › FACTORY CALIBRATION CERTIFICATE



# THE ELECTRIC TORQUE WRENCH

## LDE/LEW SERIES, 90 - 13000 Nm



High input voltage and frequency range (200-260V, 47-63Hz), designed for international use

Electronic right/left switching function

Torque values readable on the label

Digital display with visual-acoustic operator guidance for even simpler operation

Optional: Torque rotation angle mode

Planetary gear unit with Ceramic-Teflon®-coated tooth flanks

Supplied with individual GEDORE factory calibration certificate



LEW series



## Resistant gear unit combined with intelligent electronics

Setting new standards with the robust gear unit housing and intelligent electronics under the display: Service functions such as overload and recalibration are displayed to the user. In default, the display shows the torque level. In addition, if required, the display can be changed from torque level to torque value.



## Reliable documentation of results with the bolting module TRACK

The classical electric high-level torque wrench is also available with the TRACK documentation function. Designed for the toughest construction site applications, the inductive data transmission system is used for non-contact transfer of your data to the laptop/PC where you can conveniently edit them further.

## Further functions (optional)

Optionally, the electric torque wrench, which is available in straight and angled versions, can be upgraded with a data read-out function, the torque-rotation angle mode and the Nm display function.



More information about documentation modules  
see pages 54/55



## The display and its functions:

Torque mode



5 digit display



Gear display



Select button



Potentiometer wheel for torque settings and menu navigation



Inductive interface



Torque angle rotation mode



Unit display



Enter key



Rotation direction LED to indicate drive direction



## HAND GRIP

i



From version size LDE-70, the electric torque wrench is supplied with a rotating hand grip to facilitate the easy operation of the device.



The hand grip is included from size LEW-60 for the angled electric torque wrenches.



## Scope of delivery

- › Device
- › Hand grip (from LDE-70/LEW-60)
- › Reaction arm cranked with lock on function\* made of chrome vanadium steel
- › Tool box
- › Operating instructions
- › Factory calibration certificate



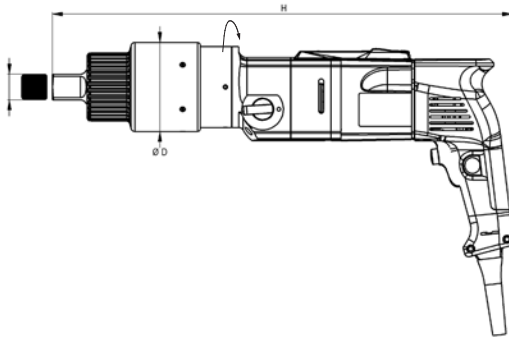
## Optional accessories

- › Reaction arm made of light alloy, straight with adjustable locking knob with movable square-end and retaining ring
- › Reaction ring for bespoke reaction arm design
- › Module LE.TRACK
- › Function LA.M+a (from construction size -15)

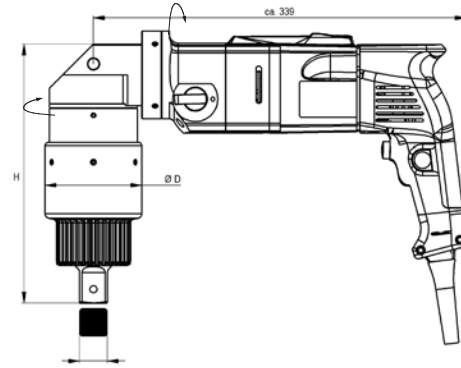
\*lock on function available for 3/4" and 1"



## Technical data



LDE series – straight version



LEW series – angled version

### LDE series - straight version

Type	N·m min <sup>*1</sup> /max <sup>*2</sup>	lbf·ft min <sup>*1</sup> /max <sup>*2</sup>	~ U/min	■	Ø D mm	H mm	kg <sup>*3</sup>
LDE-05	90 - 500	70 - 370	44	3/4"	80	405	4.5
LDE-075	100 - 750	80 - 550	22	3/4"	80	439	5.0
LDE-15	250 - 1500	180 - 1110	20	1"	88	455	6.1
LDE-28	350 - 2800	260 - 2050	6	1"	88	495	7.3
LDE-40	500 - 4000	370 - 2950	5	1"	88	495	7.3
LDE-60	700 - 6000	520 - 4400	3.5	1 1/2"	102	515	9.2
LDE-70	850 - 7500	630 - 5500	3	1 1/2"	128	531	12.1
LDE-90	1100 - 9000	810 - 6600	2.5	1 1/2"	142	542	14.0
LDE-120	1600 - 13 000	1180 - 9500	2	1 1/2"	174.5	560	20.0

<sup>\*1</sup> Lowest torque in 2nd gear    <sup>\*2</sup> Maximum torque in 1st gear  
Continuous sound pressure level corresponding to <78,7 dB (A)

<sup>\*3</sup> Without reaction arm  
Further torque ranges on request.

Vibration is less than 2.5 m/s<sup>2</sup>  
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### LEW series - angled version

Type	N·m min <sup>*1</sup> /max <sup>*2</sup>	lbf·ft min <sup>*1</sup> /max <sup>*2</sup>	~ U/min	■	Ø D mm	H mm	kg <sup>*3</sup>
LEW-05	90 - 500	70 - 370	44	3/4"	80	187	5.8
LEW-075	100 - 750	80 - 550	22	3/4"	80	220	6.4
LEW-15	250 - 1500	180 - 1110	20	1"	88	236	7.3
LEW-28	350 - 2800	260 - 2050	6	1"	88	276	8.6
LEW-40	500 - 4000	370 - 2950	5	1"	88	276	8.6
LEW-60	700 - 6000	520 - 4400	3.5	1 1/2"	102	296	10.7
LEW-70	850 - 7500	630 - 5500	3	1 1/2"	128	311	12.9
LEW-95	1100 - 9500	810 - 7000	2.5	1 1/2"	142	323	14.6
LEW-120	1600 - 13 000	1180 - 9500	2	1 1/2"	174.5	340	20.6

<sup>\*1</sup> Lowest torque in 2nd gear    <sup>\*2</sup> Maximum torque in 1st gear  
Continuous sound pressure level corresponding to <78,7 dB (A)

<sup>\*3</sup> Without reaction arm  
Further torque ranges on request.

Vibration is less than 2.5 m/s<sup>2</sup>  
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# THE STEEL STRUCTURE TORQUE WRENCH

The steel structure torque wrench must be light but robust in design for the assembly of bridges or steel construction projects. We are prepared for such situations. Decades of experience and development work, combined with the known high quality requirements, are clearly demonstrated by the torque wrenches in this range. As with all series devices, you can rely on the acknowledged torque precision of these special versions.



## Technical data

Type	N-m min*1/ max*2	lbf-ft min*1/ max*2	~ U/min	■	Ø D mm	H mm	kg*3
LDE-09ST	120 - 900	90 - 670	19.0	3/4"	80	439	5.2
LDE-16ST	300 - 2200	220 - 1620	7.0	1"	88	472	6.6
LDE-28ST	450 - 3200	330 - 2360	6.1	1"	88	495	7.3
LEW-09ST	120 - 900	90 - 670	19.0	3/4"	80	220	6.5
LEW-16ST	300 - 2200	220 - 1620	7.0	1"	88	253	7.9
LEW-28ST	450 - 3200	330 - 2360	6.1	1"	88	276	8.6

\*1 Lowest torque in 2nd gear

Continuous sound pressure level corresponding to <78,7 dB (A)

\*2 Maximum torque in 1st gear

\*3 Without reaction arm

Further torque ranges on request.

Vibration is less than 2.5 m/s<sup>2</sup>

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### Steel Structure Torque Wrench

LDE-/LEW-09ST; Tightening of HV-connections from M12 to M24 (10.9)  
LDE-/LEW-16ST; Tightening of HV-connections from M16 to M30 (10.9)  
LDE-/LEW-28ST; Tightening of HV-connections from M20 to M36 (10.9)



# OUR TORQUE WRENCH IN DIFFERENT BOLTING SITUATIONS



Source: MERK Timber GmbH



## Metropol Parasol, Sevilla

The new landmark in Seville, Spain, was mounted with our high-torque wrenching device.  
A total of 21900 bolted connections were tightened on the wooden construction.



## Football stadium TSG Hoffenheim

The roof structure of the football stadium belonging to TSG 1899 Hoffenheim was mounted with our high-torque wrenching device.



# LPK, LPK-X

## PNEUMATIC TORQUE WRENCH

### LPK



### SCOPE OF DELIVERY

- › DEVICE
- › REACTION ARM CRANKED
- › TOOL BOX
- › OPERATING MANUAL
- › FACTORY CALIBRATION CERTIFICATE



### LPK-X



### SCOPE OF DELIVERY

- › DEVICE
- › REACTION ARM CRANKED
- › TOOL BOX
- › OPERATING MANUAL
- › FACTORY CALIBRATION CERTIFICATE



# THE PNEUMATIC TORQUE WRENCH

## LPK SERIES, 80 - 12800 Nm

Braked 360 °-rotating motor unit for comfortable working with optimal operator safety

+

Torque values readable on the label

+

Planetary gear unit with Ceramic-Teflon®-coated tooth flanks

+

Supplied with individual GEDORE factory calibration certificate

+



Ergonomic pistol grip made of resistant pressure-cast aluminium

Rocker switch for simple change of rotation direction

Drop-forged reaction arm made of chrome-vanadium steel for even greater stability



Optional: Maintenance unit





Quiet and accurate torque  
- even from just 1.5 bar operating pressure

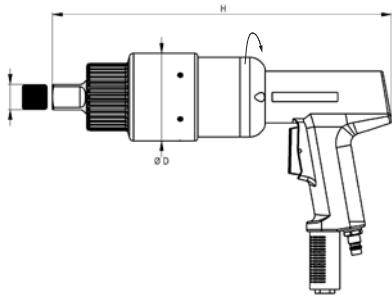
The pneumatic torque wrench functions without vibrations, thus protects the user. Hands on vibration and noise levels are significantly reduced with the GEDORE Torque Solutions GmbH pneumatic torque wrenches. The force is transmitted quietly and precisely from just 1.5 bar operating pressure via the proven high-performance gear unit to the bolt connection.

Robust pneumatic torque wrench  
for a wide range of environments



Because of the continuously generated overpressure in the device, the pneumatic torque wrench is particularly resistant when used in extremely dirty or dusty environments. Pressure fluctuations in the supply network are effectively compensated for by the proven maintenance unit comprising of an air filter, oiler and pressure reducers. The device is supplied with a constantly uniform airflow and the torque is constantly maintained.



Technical data



LPK series—pneumatic

Type	N·m min <sup>*1</sup> /max <sup>*2</sup>	lbf·ft min <sup>*1</sup> /max <sup>*2</sup>	~ U/min		Ø D mm	H mm	 kg <sup>*3</sup>
LPK-05	80 - 450	60 - 330	55	3/4"	80	295	3.0
LPK-09	200 - 900	150 - 670	24	3/4"	80	328	3.2
LPK-15	300 - 1500	220 - 1110	12	1"	88	343	4.7
LPK-22	500 - 2200	370 - 1620	7	1"	88	360	5.1
LPK-32	800 - 3200	590 - 2360	4	1"	88	383	5.8
LPK-40	850 - 4200	620 - 3100	4	1"	88	383	5.8
LPK-60	1200 - 6000	880 - 4400	4	1 1/2"	102	400	7.7
LPK-70	1500 - 7000	1110 - 5160	3	1 1/2"	128	416	10.6
LPK-95	2000 - 9500	1470 - 7000	2.5	1 1/2"	142	431	12.5
LPK-120	2500 - 12 800	1840 - 9440	1.5	1 1/2"	174.5	448	18.5

<sup>\*1</sup> Lowest torque at 1.5 bar      <sup>\*2</sup> Maximum torque at 8 bar      <sup>\*3</sup> Without reaction arm      Vibration is less than 2.5 m/s<sup>2</sup>      At 8 bar ca. 1400 l/min.  
Continuous sound pressure level corresponding to 84 dB (A)      Further torque ranges on request. All rights reserved. Subject to modifications without prior notice.

➤ Reaction arm cranked with lock on function\* made of chrome vanadium steel  
\*lock on function available for 3/4" and 1"



- › Device
- › Reaction arm cranked with lock on function made of chrome vanadium steel
- › Tool box
- › Operating instructions
- › Factory calibration certificate



- › Reaction arm made of light alloy, straight with adjustable locking knob with movable square-end and retaining ring
- › Reaction ring for bespoke reaction arm design
- › Hose (4m) 1/2"
- › Maintenance unit





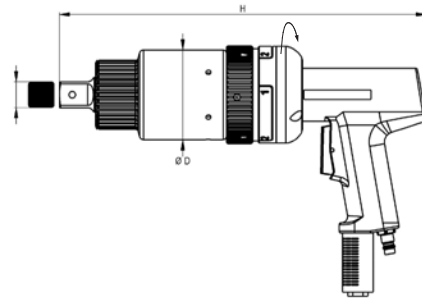
### Up to 7 times higher bolting speed

The LPK-X series has a 2-speed planet gear unit. The user can therefore select between rapid and torque mode. The rapid mode drives the bolt in up to the joining torque with a speed up to 300 rpm. It is then possible to switch to the torque mode that tightens the bolt to the precise torque required. Once the required torque has been achieved, the device switches off automatically.

If a torque wrench is not available, bolt connections are usually pre-tightened and then finished off with a torque wrench. These two working steps are combined in the LPK-X, saving working time for the user. In extensive on-site applications, the assembly times can be reduced by up to 30% through the combination of two working steps in one device with the LPK-X.



### Technical data



LPK-X series – pneumatic

Typ	N-m min <sup>*1</sup> /max <sup>*2</sup>	lbf-ft min <sup>*1</sup> /max <sup>*2</sup>	~ U/min <sup>*3</sup>	■	Ø D mm	H mm	kg <sup>*4</sup>
LPK-05 X	80 - 450	60 - 330	300	¾"	80	301	3.0
LPK-09 X	200 - 900	150 - 670	100	¾"	88	333	4.0
LPK-22 X	500 - 2200	370 - 1620	30	1"	88	367	5.5
LPK-32 X	800 - 3200	590 - 2360	25	1"	88	390	6.2
LPK-40 X	850 - 4200	620 - 3100	20	1"	88	390	7.0

<sup>\*1</sup> Lowest torque in 1st gear at 1.5 bar      <sup>\*2</sup> Maximum torque in 1st gear at 8 bar      <sup>\*3</sup> Maximum speed in 2nd gear      <sup>\*4</sup> Without reaction arm  
 At 8 bar ca. 1400 l/min. All rights reserved.      Vibration is less than 2.5 m/s<sup>2</sup>      Continuous sound pressure level corresponding to 84 dB (A)



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OC36338818

# LDH, LDK, LHU

## HYDRAULIC SOLUTIONS

### LDH



### SCOPE OF DELIVERY

- › DEVICE INCL. SQUARE DRIVE AND COUNTER BEARING
- › TOOL BOX
- › TORQUE-SETTING-TABLE
- › OPERATING MANUAL



### LDK



### SCOPE OF DELIVERY

- › DEVICE
- › TOOL BOX
- › TORQUE-SETTING-TABLE
- › OPERATING MANUAL



### LHU



### SCOPE OF DELIVERY

- › DEVICE OIL-FILLED
- › CONTROL (M/A OR S)
- › OPERATING MANUAL



# THE HYDRAULIC TORQUE WRENCH

## LDH SERIES, 60 - 27000 Nm



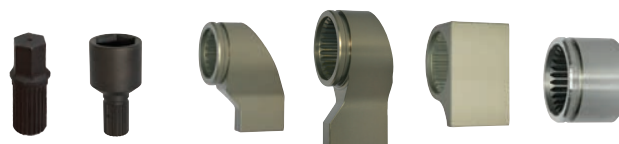
### Scope of delivery

- > Device
- > Square drive
- > Counter bearing
- > Tool box
- > Torque-setting-table
- > Operating instructions



### Optional accessories

- > Allen screw
- > Toothed impact sockets and special inserts on request
- > Different reaction arms (look p. 36)
- > Hydraulic connection in 360° x 180° swiveling design (see above)
- > Inclined connection (see above)





### Light, easy to handle and with high torque

The LDH is used where space is limited but high torque is required. In order to facilitate bolting operations for the user, the hydraulic torque wrench series has been designed with high-performance aluminium and subject to continuous improvements.

The size has therefore been constantly reduced while more and more features have been included to make the difficult work easier for the user.

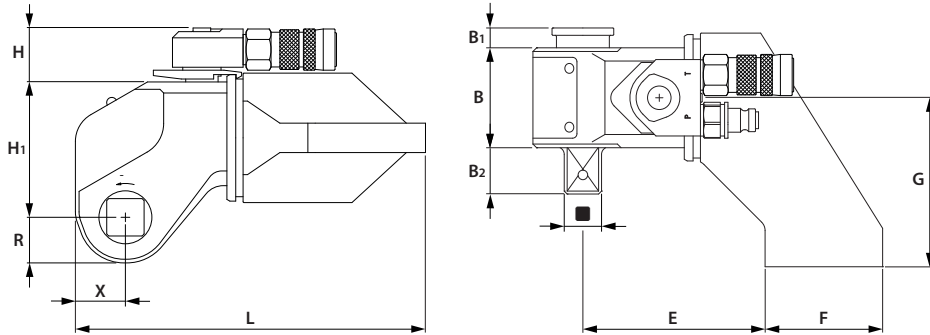
An integrated relief valve ensures working safety and the flow-optimised, generously dimensioned oil channels reduce heating up of the device during high continuous loads to a minimum.

### The perfect combination

Together with our hydraulic units, the hydraulic torque wrenches achieve a maximum in work performance. Both components together create an excellent synergy of user-friendliness and operating convenience.



### Technical Data



Series LDH – hydraulic

Type	N-m min/ max <sup>*1</sup>	lbf-ft min/ max <sup>*1</sup>	■	B mm	B <sub>1</sub> mm	B <sub>2</sub> mm	E mm <sup>*2</sup>	F mm <sup>*2</sup>	G mm	H mm	H <sub>1</sub> mm	L mm <sup>*2</sup>	R mm	X mm	kg <sup>*3</sup>
LDH-12V	60 - 1200	45 - 880	3/4"	46	7	28	-/88	-/48	78	37	62	-/158	19	22	1.9
LDH-24V	120 - 2350	90 - 1730	3/4"	53	6	28	59/109	60/58	95	37	72	146/194	24	27	2.0
LDH-48V	230 - 4800	170 - 3500	1"	68	14	32	70/125	89/80	115	37	92	193/239	31	34	3.9
LDH-75V	400 - 7560	290 - 5570	1 1/2"	76	12	44	74/134	94/93	122	37	107	207/266	36	39	6.2
LDH-100V	500 - 10 000	370 - 7300	1 1/2"	84	13	39	85/150	105/99	130	37	115	233/292	39	43	7.8
LDH-170V	800 - 16 000	590 - 11800	1 1/2"	100	11	45	93/163	118/108	150	50	135	265/325	48	54	11.8
LDH-270V	1300 - 27 000	960 - 19900	2 1/2"	119	18	76	121/206	145/133	200	50	164	329/402	59	63	24.0

<sup>\*1</sup> Maximum torque at 800 bar  
Vibration is less than 2.5 m/s<sup>2</sup>

<sup>\*2</sup> Reaction arm type L(LM) / Reaction arm type S(LM)  
Continuous sound pressure level corresponding to <70 dB (A)

<sup>\*3</sup> Without reaction arm  
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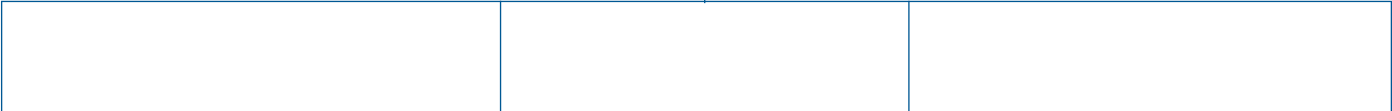
Subject to modifications without prior notice.

Allen screw - ISW

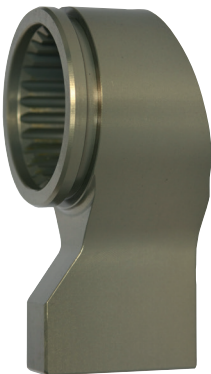
Type	ISW mm	Type	ISW mm	Type	ISW mm
LDH-12V	ISW 12V-14	LDH-75V	ISW 75V-17	LDH-170V	ISW 170V-27
	ISW 12V-17		ISW 75V-19		ISW 170V-30
	ISW 12V-19		ISW 75V-22		ISW 170V-32
LDH-24V	ISW 24V-14		ISW 75V-24		ISW 170V-36
	ISW 24V-17		ISW 75V-27		ISW 170V-41
	ISW 24V-19		ISW 75V-30		ISW 170V-46
	ISW 24V-22	LDH-100V	ISW 75V-32	LDH-270V	ISW 270V-36
	ISW 24V-24		ISW 100V-19		ISW 270V-41
LDH-48V	ISW 48V-17		ISW 100V-22		ISW 270V-46
	ISW 48V-19		ISW 100V-24		ISW 270V-50
	ISW 48V-22		ISW 100V-27		ISW 270V-55
	ISW 48V-24		ISW 100V-30		ISW 270V-60
	ISW 48V-27		ISW 100V-32		ISW 270V-65
	ISW 48V-30		ISW 100V-36		ISW 270V-70
	ISW 48V-32				



Reaction arms



Reaction arm S (LM)  
Standard design



Reaction arm L (LM) (except LDH-12V)  
Compact design



Reaction arm K (LM)  
For embedded screws  
and raised allen screws



Reaction sleeve RH (St)

# THE CASSETTE WRENCH

## LDK SERIES, 160 - 24000 Nm



### Scope of delivery

- › Device
- › Tool box
- › Torque-setting-table
- › Operating instructions



### Optional accessories

- › Retaining ring – HR and hexagon insert – SA
- › Exchangeable cassette - WK  
Inch sizes on request
- › In-Out impact socket
- › Hydraulic connection  
in 360° x 180° swiveling design (see above) for LDK-3 - LDK-12
- › Inclined connection (see above)





Simple loosening and precise tightening in confined spaces

Tight spots can become problem spots. In such situations, the LDK series is the ideal solution. Compact dimensions are paired here with high torques. The flat hexagon cassettes have been optimised for minimum radius and compact construction heights.



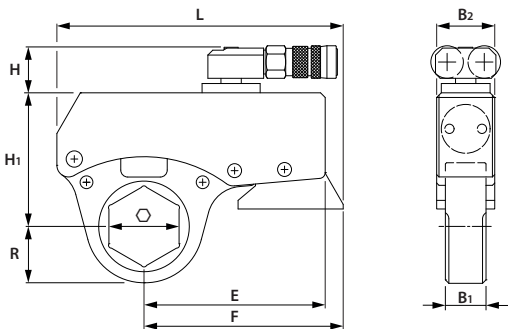
Simple operation and handling characterises the cassette torque wrench

The interchangeable cassettes can be rapidly and easily changed with the compression bolt technology. Different types of hydraulic connections enable adaptation to diverse bolting operations even in difficult to access points.


Economic in use

A separate cassette size is not always necessary for every wrench width. The installation spaces often leave enough room for the economic hexagon adapters. These are, like all the adaptations, locked in the corresponding interchangeable cassette with a holding ring so that they cannot be lost.

Technical data



LDK series – hydraulic

Type	N·m min/ max <sup>*1</sup>	lbf·ft min/ max <sup>*1</sup>	⬡mm	⬡"	B <sub>1</sub> mm	B <sub>2</sub> mm	E mm	F mm	H mm	H <sub>1</sub> mm	L mm	R mm	 <sup>*2</sup>
LDK - 3	160 - 3300	120 - 2400	32 - 60	1 1/4" - 2 3/8"	28	40	137	145	39.2	91/103	205	28 - 48	1.6
LDK - 6	350 - 6200	260 - 4500	41 - 80	1 5/8" - 3 1/8"	35	50	156	172	39.2	115/130	247	34 - 60	2.4
LDK - 12	550 - 12 500	410 - 9200	55 - 100	2 3/16" - 3 7/8"	47	65	200	215	39.2	141/156	311	46 - 73	4.4
LDK - 24	1200 - 24 000	880 - 17 700	80 - 130	3 1/8" - 5"	56	82	245	260	50.0	182/202	385	62 - 96	8.2

<sup>\*1</sup> Maximum torque at 800 bar     <sup>\*2</sup> Without exchangeable cassette  
Continuous sound pressure level corresponding to <70 dB (A)

Vibration is less than 2.5 m/s<sup>2</sup>  
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## Technical data: Interchangeable cassettes - WK, Hexagon insert - SA, Retaining ring - HR

Type	WK Typ	R mm	H <sub>1</sub> mm	N·m max <sup>*1</sup>	lbf·ft max <sup>*1</sup>	SA <sup>*2</sup> SW/SW		HR mm
LDK-3	WK3-32	28.5	91	1700	1300	-	-	-
	WK3-36	31.5	91	2100	1550	-	-	-
	WK3-41	34.5	91	2500	1850	SA3-41»36	SA3-41»32	HR-41
	WK3-46	38.5	91	2890	2130	SA3-46»41	SA3-46»36	HR-46
	WK3-50	42.0	103	3290	2430	SA3-50»46	SA3-50»41	HR-50
	WK3-55	45.0	103	3290	2430	SA3-55»50	SA3-55»46	HR-55
	WK3-60	47.5	103	3290	2430	SA3-60»55	SA3-60»50	HR-60
LDK-6	WK6-41	34.5	115	3840	2830	SA6-41»36	-	HR-41
	WK6-46	39.5	115	4805	3540	SA6-46»41	SA6-46»36	HR-46
	WK6-50	43.5	115	5410	3990	SA6-50»46	SA6-50»41	HR-50
	WK6-55	46.5	115	5410	3990	SA6-55»50	SA6-55»46	HR-55
	WK6-60	48.5	115	5410	3990	SA6-60»55	SA6-60»50	HR-60
	WK6-65	52.5	130	6190	4570	SA6-65»60	SA6-65»55	HR-65
	WK6-70	55.5	130	6190	4570	SA6-70»65	SA6-70»60	HR-70
	WK6-75	57.5	130	6190	4570	SA6-75»70	SA6-75»65	HR-75
	WK6-80	60.5	130	6190	4570	SA6-80»75	SA6-80»70	HR-80
LDK-12	WK12-55	46.5	141	8000	5900	SA12-55»50	SA12-55»46	HR-55
	WK12-60	48.5	141	8000	5900	SA12-60»55	SA12-60»50	HR-60
	WK12-65	52.5	141	9800	7230	SA12-65»60	SA12-65»55	HR-65
	WK12-70	55.5	141	9800	7230	SA12-70»65	SA12-70»60	HR-70
	WK12-75	57.5	141	9800	7230	SA12-75»70	SA12-75»65	HR-75
	WK12-80	60.5	141	10 860	8010	SA12-80»75	SA12-80»70	HR-80
	WK12-85	64.5	156	12 500	9220	SA12-85»80	SA12-85»75	HR-85
	WK12-90	67.5	156	12 500	9220	SA12-90»85	SA12-90»80	HR-90
	WK12-95	70.5	156	12 500	9220	SA12-95»90	SA12-95»85	HR-95
	WK12-100	73.5	156	12 500	9220	SA12-100»95	SA12-100»90	HR-100
LDK-24	WK24-80	62.0	182	13 950	10 290	SA24-80»75	SA24-80»70	HR-80
	WK24-85	66.0	182	15 810	11 660	SA24-85»80	SA24-85»75	HR-85
	WK24-90	69.0	182	16 430	12 120	SA24-90»85	SA24-90»80	HR-90
	WK24-95	72.0	182	17 860	13 170	SA24-95»90	SA24-95»85	HR-95
	WK24-100	76.0	182	17 860	13 170	SA24-100»95	SA24-100»90	HR-100
	WK24-105	80.0	182	17 860	13 170	SA24-105»100	SA24-105»95	HR-105
	WK24-110	84.0	202	24 000	17 700	SA24-110»105	SA24-110»100	HR-110
	WK24-115	87.0	202	24 000	17 700	SA24-115»110	SA24-115»105	HR-115
	WK24-120	90.0	202	24 000	17 700	SA24-120»115	SA24-120»110	HR-120
	WK24-125	93.0	202	24 000	17 700	SA24-125»120	SA24-125»115	HR-125
	WK24-130	96.0	202	24 000	17 700	SA24-130»125	SA24-130»120	HR-130

<sup>\*1</sup> Maximum torque at 800 bar      <sup>\*2</sup> Special adapter on request  
Continuous sound pressure level corresponding to <70 dB (A)

Vibration is less than 2.5 m/s<sup>2</sup>  
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# THE HYDRAULIC UNIT

## LHU SERIES



**Manual control - M**  
The classic, semi-automatic control system enables the user to manually initiate every stroke of the hydraulic torque wrench. The return stroke is automatic.



OR



**Automatic control - A**  
The bolting operation is started by pressing a button, then automatically implemented and ended in the automatic control mode.



OR

**Modular control - Solution**  
The Solution control system is modularly expandable. All settings can be configured and bolting operations documented via the display.

Technical data

Manual control – M	Type	V / Hz	MP L/min., bar	HP L/min., bar	Tank L <sup>*1</sup>	LxBxH mm	 <sup>*2</sup>
	LHU-30 M	230/50	1.7/320	0.8 / 800	2.5	400x240x380	27.0
	LHU-40 M	230/50	3.1/320	0.7 / 800	4.0	480x270x400	33.0
	LHU-60 M	400/50, 60	4.7, 5.6/320	1.4 , 1.7 / 800	6.2	480x270x400	36.5
* Frequencies 110/50 Hz; 110/60 Hz; 230/60 Hz on request							

Automatic control – A	Type	V / Hz	MP L/min., bar	HP L/min., bar	Tank L <sup>*1</sup>	LxBxH mm	 <sup>*2</sup>
	LHU-30 A	230/50	1.7/320	0.8/800	2.5	400x240x380	27.2
	LHU-40 A	230/50	3.1/320	0.7/800	4.0	480x270x400	33.5
	LHU-60 A	400/50, 60	4.7, 5.6/320	1.4 , 1.7/800	6.2	480x270x400	37.2
* Frequencies 110/50 Hz; 110/60 Hz; 230/60 Hz on request							

Modular control - Solution	Type	V / Hz	MP L/min., bar	HP L/min., bar	Tank L <sup>*1</sup>	LxBxH mm	 <sup>*2</sup>
	LHU-30 Solution	230/50	1.7/320	0.8/800	2.5	400x240x380	27.5
	LHU-40 Solution	230/50	3.1/320	0.7/800	4.0	480x270x400	34.0
	LHU-60 Solution	400/50, 60	4.7, 5.6/320	1.4, 1.7/800	6.2	480x270x400	37.5
* Frequencies 110/50 Hz; 110/60 Hz; 230/60 Hz on request							

<sup>\*1</sup> Supplied filled with oil and ready for operation  
Continuous sound pressure level corresponding to 65 dB (A) at idle and 83 dB (A) at max. pressure of 800 bar.  
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<sup>\*2</sup> Weight with control system, without oil

Vibration is less than 2.5 m/s<sup>2</sup>

Modular control LHU Solution

The LHU Solution series is the high-end model in modern hydraulic unit technology. The operator controls the entire bolting process via remote control. In addition to the basic bolting methods (manual, automatic and torque-rotation angle), the control system can be retrofitted according to your requirements with additional modules of our bolting software.

 More information about documentation modules see pages 54/55

The display and its functions:



Integrated work lighting

Visual and acoustic user guidance

3.5 „high-resolution LCD color display with impact-resistant macrolon screen

Back button

Start bolting

Integrated holding magnets on the back for secure fixation on metallic surfaces

Inductive interface for data transmission

Adjustment wheel for easy selection of bolting options and torque values

Enter button

Pump OFF



# LKV, LKS

## MANUAL SOLUTIONS

### LKV



### SCOPE OF DELIVERY

- › DEVICE
- › REACTION ARM CRANKED
- › TOOL BOX
- › OPERATING MANUAL
- › FACTORY CALIBRATION CERTIFICATE
- › TORQUE CALCULATOR



### LKV-L OR -Z



### SCOPE OF DELIVERY

- › DEVICE
- › REACTION ARM
- › TOOL BOX
- › OPERATING MANUAL
- › FACTORY CALIBRATION CERTIFICATE
- › TORQUE CALCULATOR



### LKS



### SCOPE OF DELIVERY

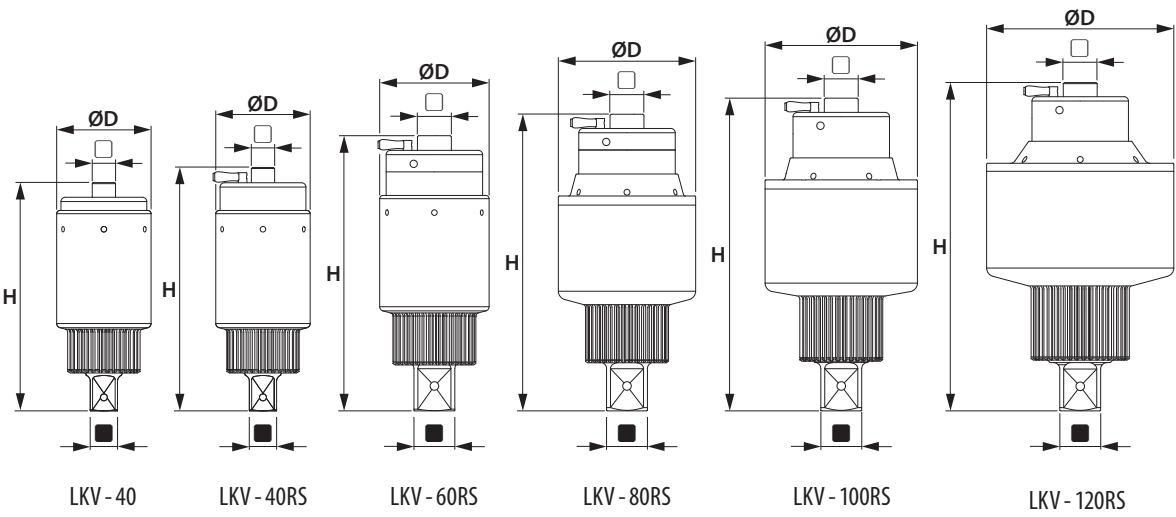
- › DEVICE
- › OPERATING MANUAL









# THE TORQUE MULTIPLIER

## LKV SERIES, 500 - 54000 Nm



Technical data LKV-40 - LKV-120RS



Type	 N-m max	 lbf-ft max	 N-m min / max <sup>*1</sup>	 lbf-ft min / max <sup>*1</sup>	 <sup>*2</sup>			Ø D mm	H mm	 kg <sup>*3</sup>
LKV-40	300	220	500 - 4000	400 - 2930	1:16	½"	1"	88	212.8	3.9
LKV-40RS	310	230	500 - 4000	400 - 2930	1:16	½"	1"	88	226.9	4.2
LKV-60RS	400	300	650 - 6000	500 - 4400	1:18	¾"	1 ½"	102	256.2	6.6
LKV-80RS	420	310	800 - 8000	600 - 5870	1:22	¾"	1 ½"	128	276.5	9.1
LKV-100RS	410	305	1000 - 10 000	700 - 7330	1:28.5	¾"	1 ½"	142	291.5	10.9
LKV-120RS	380	280	1320 - 13 000	1000 - 9530	1:39	¾"	1 ½"	174.5	306	17.0

<sup>\*1</sup> Maximum load limit! Take into account a reserve of ~25% when selecting a device and, where applicable, note increased loosening torques!

<sup>\*2</sup> Approx. specification, calculated ratio    <sup>\*3</sup> Without reaction arm

Further torque ranges on request. All rights reserved. Subject to modifications without prior notice.



Scope of delivery

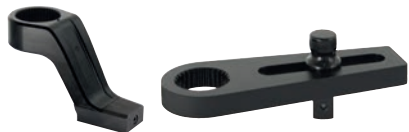
- › Device
- › Reaction arm cranked with lock on function\*  
made of chrome vanadium steel (up to LKV-80 RS)
- › Reaction arm cranked made of light alloy with protective cap  
made of steel (from LKV-100RS)
- › Tool box
- › Operating instructions
- › Factory calibration certificate
- › Torque calculator



Optional accessories

- › Reaction arm made of light alloy, straight with adjustable locking knob with moveable square-end and retaining ring (up to LKV-80RS)

\*lock on function available for ¾" and 1"





# TECHNICAL DATA LKV-12



## Small, easy to handle, light and sturdy

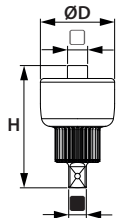
The smallest torque multiplier in this series is particularly suitable for maintenance purposes and in workshops. The little power packet has been reduced to the smallest possible dimensions without losing any robustness or torque power. It is equipped with an offset reaction arm and can be retrofitted with a straight reaction arm.









The sun gear acts as a predetermined breaking point if the device is overloaded. This protects both the operator and the device. The sun gear can be easily and rapidly replaced by the operator. Assembly and cost outlay remain low.



## The optimal on-board tool

The LKV-12 has small dimensions and can fit in a pocket. This device is highly suitable for use as an on-board tool in utility or construction site vehicles. It can be stored in the vehicle in a stable transport case. The LKV is permanently ready for use and can be employed at any time, even after complex uses.



Type	 N·m max	 lbf·ft max	 N·m min / max <sup>*1</sup>	 lbf·ft min / max <sup>*1</sup>	 <sup>*2</sup>			Ø D mm	H mm	 <sup>*3</sup>
LKV-12	270	200	50 - 1300	40 - 950	1:5	1/2"	3/4"	80	132.5	1.3

<sup>\*1</sup> Maximum load limit! Take into account a reserve of ~25% when selecting a device and, where applicable, note increased loosening torques!  
<sup>\*2</sup> Approx. specification, calculated ratio      <sup>\*3</sup> Without reaction arm  
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# THE TORQUE MULTIPLIER

## SERIES LKV, 100 - 2800 Nm

Lightweight, high-performance aluminium housing is 30 % lighter than a steel one



Output square as overload protection for gear unit protection



Supplied with individual GEDORE factory calibration certificate



Fixed reaction arm in straight or cranked version



Series LKV-20L / 28L



### Scope of delivery

- › Device
- › Reaction arm cranked or straight (screwed to the device)
- › Tool box
- › Operating Instructions
- › Factory calibration certificate
- › Torque calculator



### Replacement parts

- › Replacement square drive for LKV-20
- › Replacement square drive for LKV-28



# TECHNICAL DATA LKV-20/28



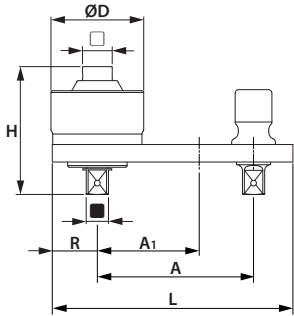
Popular for flange bolt connections:  
LKV-20/28L

The positioning of the torque multiplier must be implemented easily and rapidly, particularly for flange bolt connections. The LKV-L is equipped with a fixed straight reaction arm and is therefore a complete solution for flange bolt connections. The required spacing between two bolts can be rapidly and easily set using the adjustable reaction square, accelerating work.

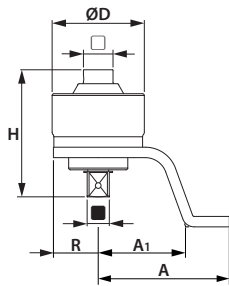


Practical and easy to handle:  
LKV-20/28Z









The LKV-Z series is particularly suitable for mechanical and plant engineering, maintenance and the transport industry. This series also has a fixed reaction arm, but cranked version. The gear unit is protected against overload with a shearing square which can be easily replaced.



LKV-L



LKV-Z

Type	 N-m max	 lbf-ft max	 N-m min / max <sup>*1</sup>	 lbf-ft min / max <sup>*1</sup>	 <sup>*2</sup>			A mm	A <sub>1</sub> mm	Ø D mm	H mm	R mm	L mm	 kg <sup>*3</sup>
LKV-20L	580	430	100 - 2000	70 - 1500	1:4	¾"	1"	152	73	88	131	43	220	1.8
LKV-20Z	580	430	100 - 2000	70 - 1500	1:4	¾"	1"	150	100	88	131	43	194	1.8
LKV-28L	550	410	500 - 2800	400 - 2050	1:5.5	¾"	1"	199	83	106	146	52	275	2.4
LKV-28Z	550	410	500 - 2800	400 - 2050	1:5.5	¾"	1"	151	101	106	146	52	204	2.4

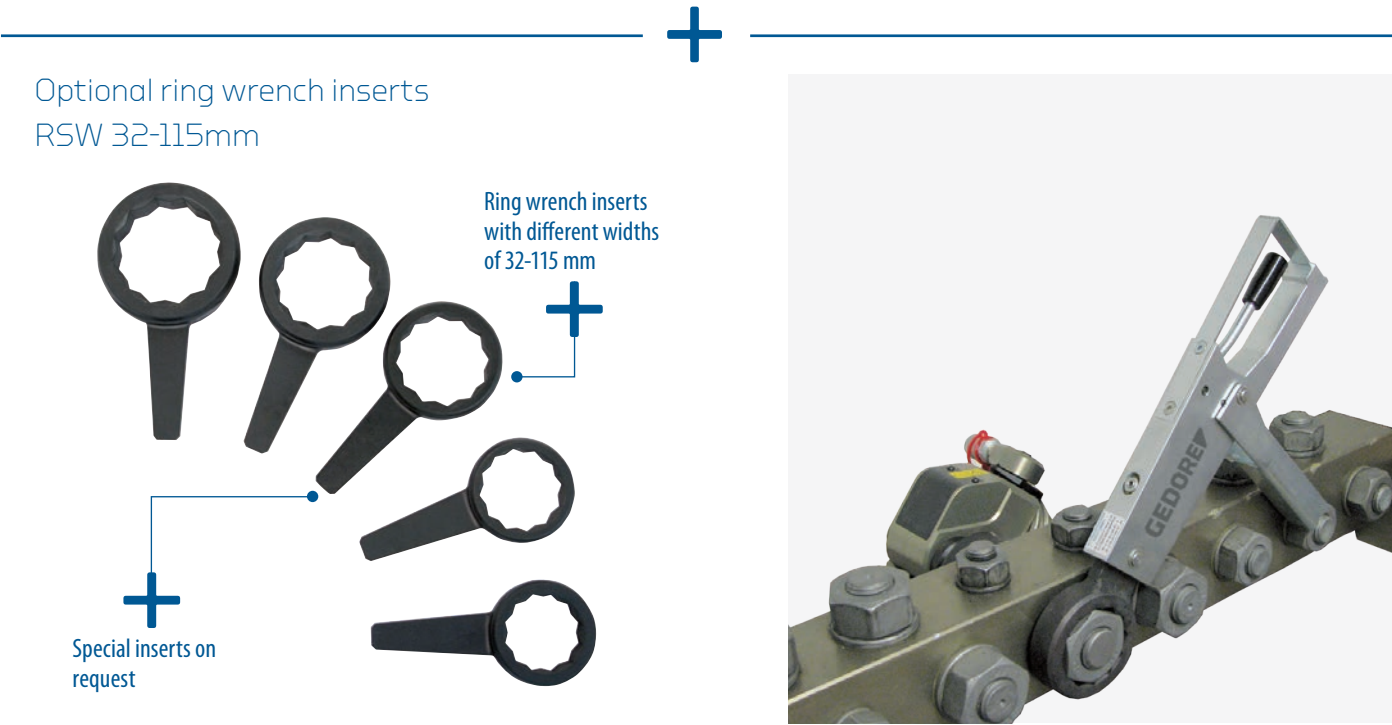
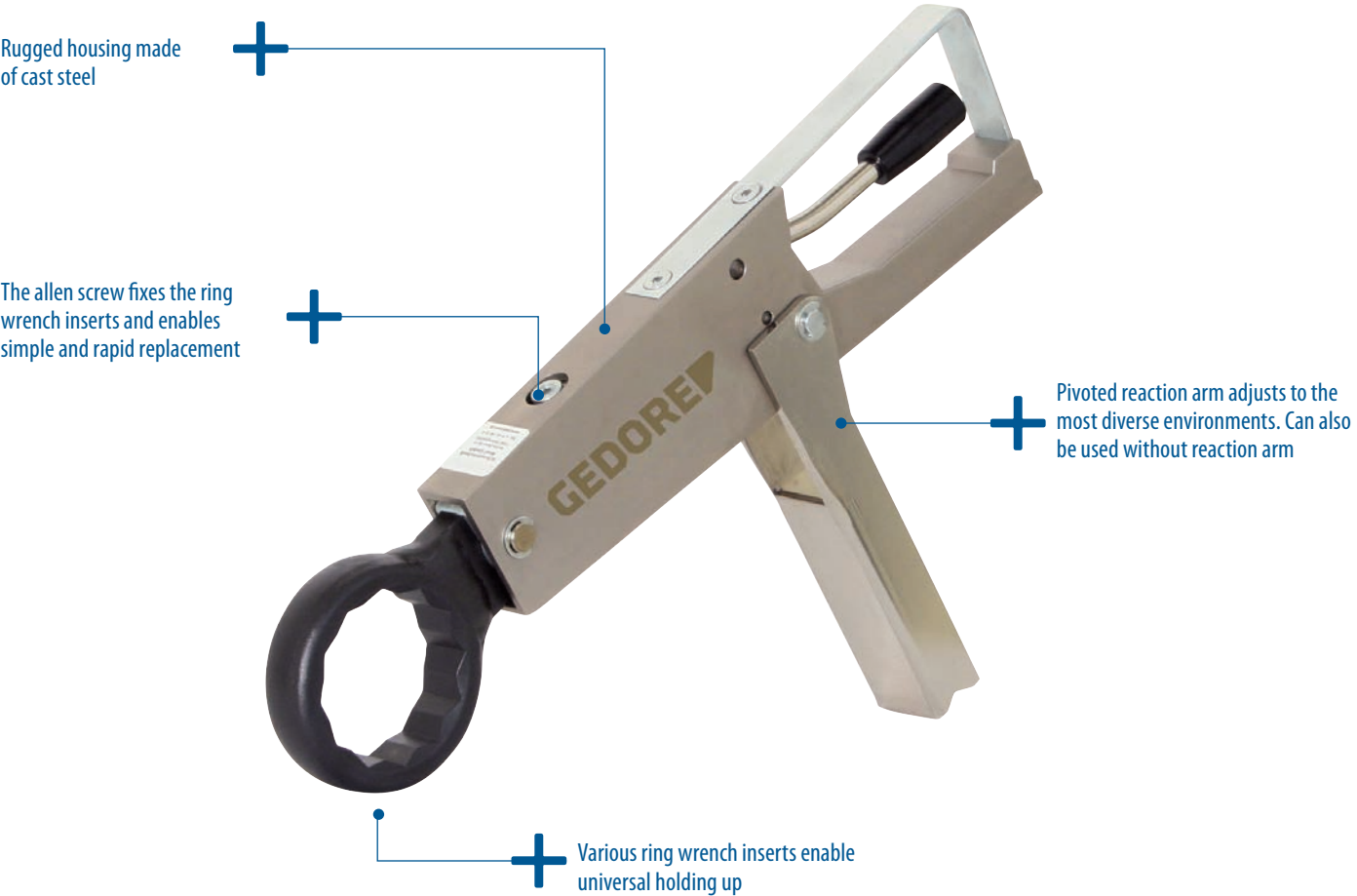
<sup>\*1</sup> Maximum load limit! Take into account a reserve of ~25% when selecting a device and, where applicable, note increased loosening torques!

<sup>\*2</sup> Approx. specification, calculated ratio      <sup>\*3</sup> Without reaction arm

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# THE COUNTER WRENCH

## LKS SERIES, RSW 32 - 115 mm





Danger to assembly personnel must be avoided

Every user knows the problems and dangerous situations that can arise when counter-holding while a bolted connection is being tightened. The wrench used for counter-holding can often rotate with unpredictable torques, block or jump off. Once the bolting operation is complete, it often needs to be levered off or even knocked off. The danger of injury for the assembly personnel is very high here and the risk of damaging neighbouring components or the tools is also significant. The results can be irritating, time loss and assembly downtimes.

The solution: The GEDORE Counter Wrench

Equipped with the appropriate insert, the device utilises a thrust bearing and absorbs the driving torque with the integrated mechanics. Following completion of the bolting operation, a simple press of the lever and the counter-wrench can be rapidly and easily released.




Frequently copied, but never matched

The patented mechanism of the GEDORE counter wrench is unique. Only the precise interplay of the individual components ensures correct and problem-free function. Cheaper copies can bend or stick under large loads. The ring inserts are made of forged chrome-vanadium steel as of size 70.



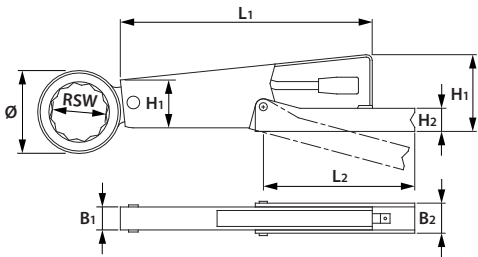
Technical data

Type	L <sub>1</sub> mm	B <sub>1</sub> mm	H <sub>1</sub> mm	L <sub>2</sub> mm	B <sub>2</sub> mm	H <sub>2</sub> mm	
LKS	310	27	65/95	190	38	30	2.6 / 0.4 <sup>*1</sup>

<sup>\*1</sup> Plus reaction element

Ring wrench inserts type RSW<sup>\*2</sup>

RSW mm	Ø <sup>*3</sup> mm	RSW mm	Ø <sup>*3</sup> mm	RSW mm	Ø <sup>*3</sup> mm
32	54	60	94	90	152
36	54	65	104	95	152
41	60	70	110	100	155
46	75	75	115	105	172
50	80	80	126	110	172
55	88	85	130	115	172



<sup>\*2</sup> According to DIN 7444, <sup>\*3</sup>Head Diameter  
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# WORK LOGGED AND CONTROLLED WITH THE BOLTING SOFTWARE

Increasing safety and quality requirements make it necessary to prove the quality of each individual fitting.

With the software modules, bolted connections can not only be predefined and saved, but also logged for quality-assured archiving.

## Documentation module TRACK for quality assurance

With the module TRACK bolting processes can be traced.  
During the bolting work, the data is logged and then exported to the PC.  
A bolting protocol can be created and saved as Adobe PDF or Microsoft Excel file.

This ensures that all bolts have been bolted with the correct settings.  
The encrypted log file ensures that manipulation of the data is excluded.

### Bolted Screw Protocol

GEDORE

**Master data**

Personal Number		Project Number	
Date			
Application		Subassembly	
Type		Department	
ID No. bolt		Quantity	
Tool	LHD-75	Serial Number	

**Tightening process**  
Torque tightening

**Evaluation**

Legend Status:  
AB = cancel,    ÜL = overloading,    TEMP = excess temperature,    i.O = OK,    n. i. O = not OK

No.	Date	Time	R/L	Target torque [Nm]	Actual torque [Nm]	Typical bolt	Status
1	22.01.2018	8:57:35	R	2800	2887	M36	i.O.
2	22.01.2018	13:14:04	R	8000	7957	M56	i.O.
3	22.01.2018	13:14:18	R	8000	7900	M56	i.O.
4	22.01.2018	13:16:07	R	8000	7957	M56	i.O.
5	22.01.2018	13:19:00	R	8000	7992	M56	i.O.
6	22.01.2018	13:19:27	R	6500	6510	M48	i.O.
7	22.01.2018	13:19:40	R	6500	6503	M48	i.O.
8	22.01.2018	13:54:58	R	8000	8013	M56	i.O.
9	22.01.2018	13:55:14	R	8000	8002	M56	i.O.
10	22.01.2018	13:55:30	R	8000	6989	M56	ÜL
11	22.01.2018	13:55:55	R	8000	7156	M56	ÜL
12	25.01.2018	7:57:39	R	3010	3112	M39	i.O.
13	25.01.2018	8:02:43	R	8000	8015	M56	i.O.
14	25.01.2018	8:03:12	R	8000	0	M56	AB
15	25.01.2018	8:03:32	R	8000	8021	M56	i.O.
16	25.01.2018	8:03:46	R	8000	8004	M56	i.O.
17	25.01.2018	8:04:05	R	8000	8021	M56	i.O.
18	25.01.2018	8:04:21	R	8000	8004	M56	i.O.
19	25.01.2018	8:04:38	R	8000	7452	M56	ÜL
20	25.01.2018	8:04:57	R	8000	7276	M56	ÜL
21	25.01.2018	8:05:17	R	8000	7108	M56	ÜL
22	25.01.2018	8:06:41	R	2900	2912	M39	i.O.
23	25.01.2018	8:12:06	R	8000	8012	M56	i.O.
24	25.01.2018	8:12:24	R	8000	8026	M56	i.O.
25	25.01.2018	8:12:42	R	8000	8010	M56	i.O.
26	25.01.2018	8:14:30	R	6500	6521	M48	i.O.
27	25.01.2018	8:14:46	R	6500	6547	M48	i.O.
28	25.01.2018	8:15:00	R	6500	6523	M48	i.O.
29	25.01.2018	8:15:20	R	6500	6508	M48	i.O.
30	25.01.2018	8:15:35	R	6500	6557	M48	i.O.
31	25.01.2018	8:21:24	R	5000	5055	M45	i.O.
32	25.01.2018	8:21:38	R	5000	5034	M45	i.O.
33	25.01.2018	8:21:50	R	5000	5050	M45	i.O.
34	25.01.2018	8:22:03	R	5000	5063	M45	i.O.
35	25.01.2018	8:22:19	R	5000	5030	M45	i.O.
36	25.01.2018	8:22:32	R	5000	5050	M45	i.O.
37	25.01.2018	8:33:03	R	5000	5013	M45	i.O.
38	25.01.2018	8:33:17	R	5000	5030	M45	i.O.
39	25.01.2018	8:33:30	R	5000	5013	M45	i.O.
40	25.01.2018	8:33:50	R	6500	6513	M48	i.O.
41	25.01.2018	8:34:23	R	8000	8045	M56	i.O.
42	25.01.2018	8:34:44	R	4500	4503	M42	i.O.
43	25.01.2018	8:34:57	R	4500	4506	M42	i.O.

**1 Detailed information**

**2 Log of bolting with device-specific documentation values:**

- Date / time of each bolt
- Tightening process
  - DA – Torque tightening
  - DW – Torque angle tightening
- TARGET torque
- ACTUAL torque
- Typical bolt
- Bolted connection status
  - i. O – OK
  - n. i. O – not OK
  - AB – cancel
  - ÜL – overloading
  - TEMP – excess temperature

**3** Authentic check icon is displayed in the bolting software

Forgery-proof – only original protocols are provided with this line. Manipulated documents are therefore excluded.

Original printed with GEDORE bolting software.

Quality management module QS  
for definition and documentation

The QS module is suitable for all companies who need to define and document bolting cases according to quality management specifications.

The bolted connections and values are pre-defined on the PC using our bolting software. Here any number of bolted connections can be defined and stored. These are then loaded via the interface to the device and stored in a database.

The operator can only select from the stored bolting cases on the device. After the bolting process, the results of each bolt are loaded back to the PC and documented via the software as a Bolted Screw Protocol. For more detailed information, see the TRACK module (p. 54).

Define bolting case

Define new bolting case

1

Detailed master data of your bolting case (including selection of tools) and four freely selectable fields

2

Selection of the desired tightening process

3

Entering the specifications of the bolting case

4

Definition of control parameters and error management

Master data

Application

Type

ID No. bolt

Tool

Subassembly

Department

Quantity

Process

Torque Automatic

Torque-Rotation Angle

Data export to device

1

Bolting database

2

Selection of one or more bolting cases, which would like to be exported to the device

3

Export to device or delete from device

4

Current bolting cases on the device

Bolting cases in database

Elevator loads 750.01

Elevator loads 760.01

Elevator loads 760.02

Elevator loads 760.03

Elevator loads 770.01

Elevator persons 880.01

Elevator persons 890.01

Elevator persons 900.01

Elevator persons 910.01

Elevator persons 910.02

Conveyor 500.01

Conveyor 500.02

Conveyor 510.01

Conveyor 520.01

Conveyor 520.02

Conveyor 530.01

Conveyor 540.01

Trolley system 1 300.01

Trolley system 1 310.01

Trolley system 1 320.01

Trolley system 1 320.02

Trolley system 2 450.01

Trolley system 2 460.01

Trolley system 3 500.01

Stair lift 810.01

Stair lift 820.01

Slewing bearings 210.01

Slewing bearings 220.01

Slewing bearings 230.01

Moving staircase 125.01

Moving staircase 130.01

Moving staircase 135.01

Moving staircase 135.02

Moving staircase 135.03

Moving staircase 140.01

Moving staircase 145.01

Moving staircase 145.02

Bolting cases to be loaded

Elevator loads 760.01

Elevator loads 760.02

Elevator loads 760.03

Elevator persons 880.01

Elevator persons 900.01

Moving staircase 125.01

Moving staircase 130.01

Moving staircase 135.01

Moving staircase 135.02

Bolting cases in device

Trolley system 2 450.01

Trolley system 2 470.01

Trolley system 3 500.01

Stair lift 810.01

Stair lift 820.01

Slewing bearings 210.01

Slewing bearings 220.01

Bolting software modules for the following devices available:

	GDA Solution	LDA/LAW Solution	LDE/LEW	LHU Solution	LHD
Modul TRACK	+	+	+	+	+
Modul QS	+	+	—	+	+

+

Optional available

—

Not possible



# LTC

## TORQUE TESTING BENCH TECHNOLOGY

### LTC



### SCOPE OF DELIVERY

- › DEVICE
- › SOFTWARE
- › OPERATING MANUAL
- › FACTORY CALIBRATION  
CERTIFICATE FOR TORQUE SENSORS

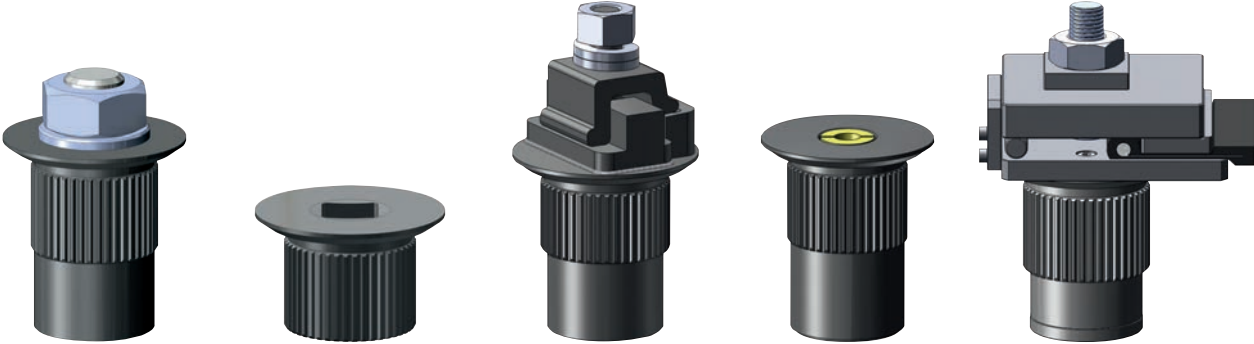


# THE TORQUE TESTING BENCH TECHNOLOGY

## LTC SERIES, 100-5.000 Nm



### Optional accessories - Bolt adapter



Static and dynamic torque measurements  
up to 5000 Nm

Static and dynamic bolting systems must be regularly checked for their torque accuracy. The Torque Check (LTC) system was developed for simple, mobile and professional dynamic torque measurement.

Torque measurement with our system

With this model you can rely on a tried-and-tested, practical measurement of your bolted cases. As in the larger LDP series the dynamic torque is determined using an original bolt. The supplied bolt adapter can be exchanged and replaced.

Basic software with comprehensive utility

The basic software included with the system has comprehensive utilities for rapid static and dynamic torque measurement in metric and imperial units. German and English are available as operating languages. At the end of each measurement, the system signals the operator immediately whether the determined values lie within the specified tolerances or not. The operator is constantly informed visually and numerically about the torque progress. This is particularly helpful when testing torque wrenches.

The basic software can be upgraded modularly to a complete test bench environment. So that the test bench grows from the entry model to a fully professional system together with your requirements.



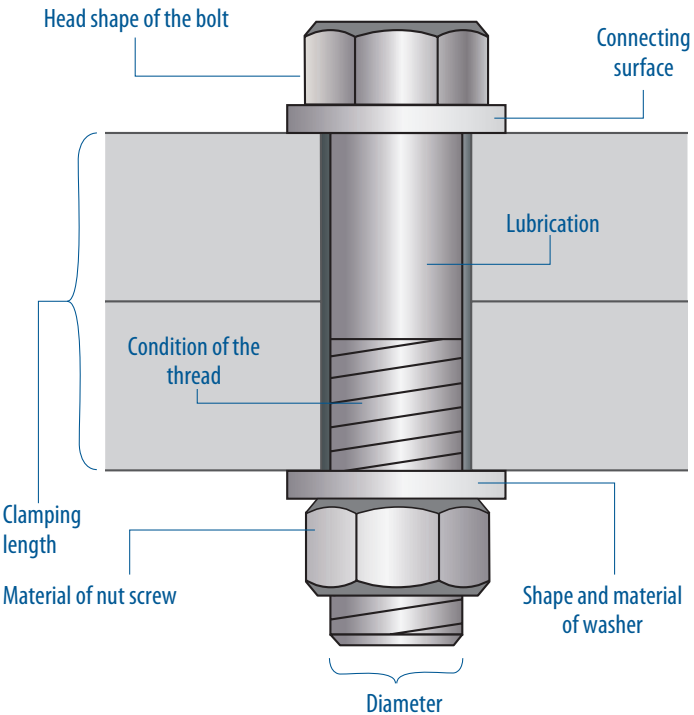
The torque check is available for the following measuring ranges:

LTC-10	100–1000 Nm
LTC-30	300–3000 Nm
LTC-50	500–5000 Nm

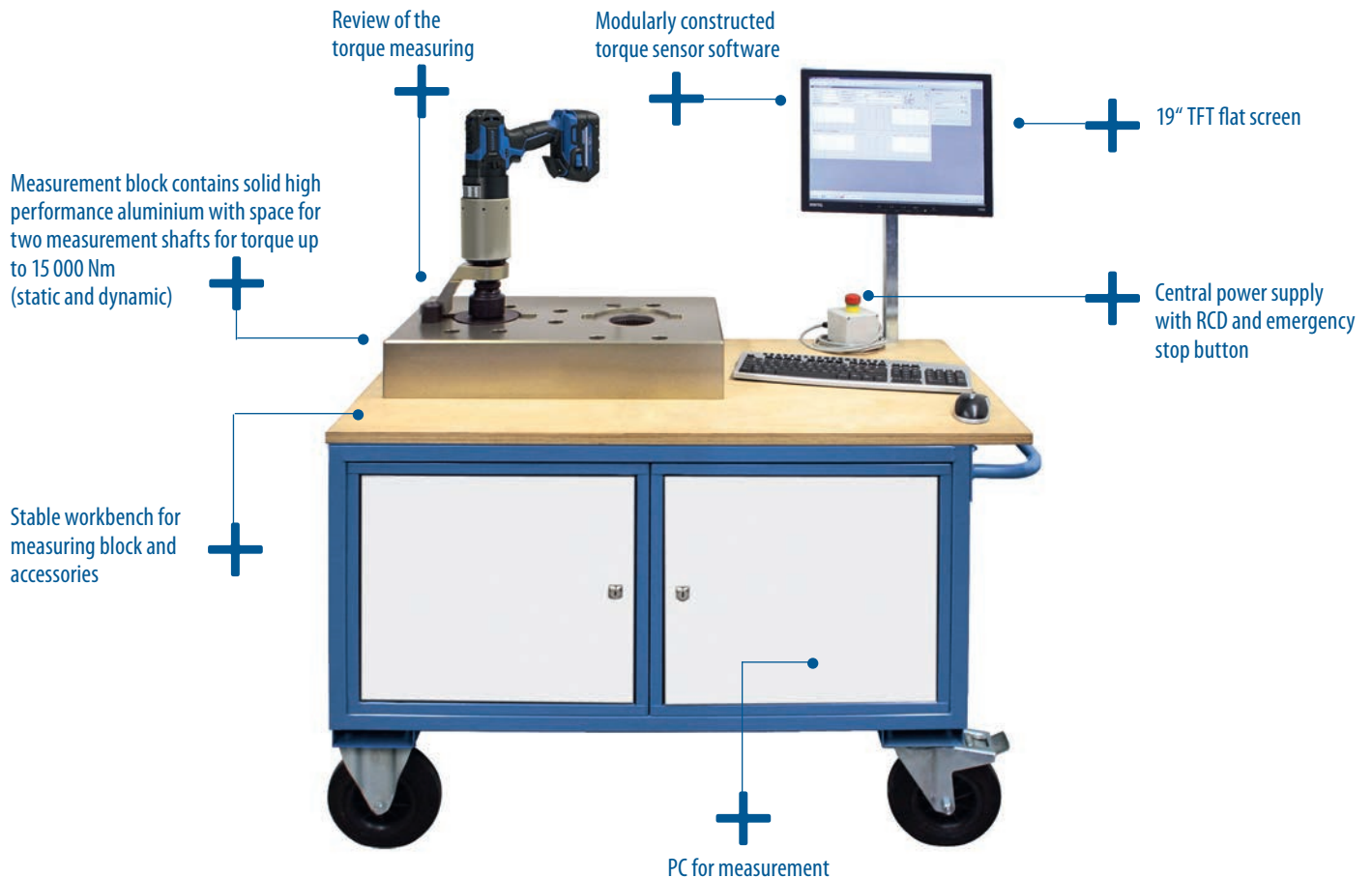


Influencing factors of the bolt connection

The aim of every bolt tightening operation is to achieve the required clamp force that is generated between two components being connected. The clamp force is influenced by numerous factors in the torque process. This means that the expected clamp force may not be reached in the end because other influencing factors have reduced the force. Influencing factors can be the condition of the thread, lubrication, etc. It is therefore very important to know the bolted connection and relevant influencing factors before any bolt is tightened. But how can the required clamp force be achieved with reproducible accuracy? The answer is: calibrate the system settings using original bolts.



# AS WE REVIEW INSIDE: THE TORQUE TESTING BENCH TECHNOLOGY



## DYNAMIC TORQUE MEASUREMENT

If one considers the influencing factors that arise during the production of a correct bolted connection, it can be seen that the greatest influence is spread to the following factors based on the bolt itself: thread type and condition, grade, diameter, length, rotation speed – the list could be continued indefinitely.

### Static and dynamic torque measurement up to 15000 Nm

The torque testing bench system takes the actual aspects of your bolting applications in practice into account as much as is feasible. Original bolts with all the influencing factors that act on them are measured to determine the dynamic torques. The value determined during measurement is actually equivalent to the dynamic torque applied to the bolted connection. Subsequent addition of correction factors for hard or soft bolting operations is not necessary. This allows you to implement rational and error-free measurement in all application cases.

### Module for different languages

Certificates in various languages are increasingly required due to the international use of bolting systems. This is no longer a problem with the language module. The languages of all previously created factory calibration certificates can be changed during measurement and afterwards. Over 15 European and Asian languages are currently available.

For this reason, there are still no recommended measurement regulations from any of the official bodies for the traceable determination of dynamic torques. Torque measurements in which the resistance of the bolt connection is simulated via mechanical brake systems or similar, don't take into account significant influencing factors.

### The modular kit

The interface between bolt and test bench is the so-called bolt adapter. The attachment of the bolt to the bolt adapter is simple. The bolted connection can be changed at any time, even during measurements. Special adaptations are just as easy with this system as the direct use of standard female hexagon inserts for static torque measurement of hydraulic wrenches, torque multipliers and torque wrenches.

### Module for graphical evaluation

The average values of all measurement series are recorded graphically and shown on the factory calibration certificate. The torque curve is recorded up to the maximum value for hydraulic torque wrenches and manual torque multipliers.

# THE FACTORY CALIBRATION CERTIFICATE



<b>Factory CALIBRATION CERTIFICATE</b>												for Battery torque wrench			
Date Type Serial No Inventory No Model Year		10.03.2018 LDA-22 DA09.00107  2018		Manufacturer Inspector Temperature min. torque: max. torque: Tolerance		GEDORE Max Mustermann 23,1 °C 250 Nm 2180 Nm 5 %		Bolting Adapter: M20x90: II 1-3 M24x120: I 1, II 4-7 M30x130: I 2-4 M36x130: I 5-7							
MEASURED VALUES 1. Gear [Nm]										EVALUATION					
Set.	1	2	3	4	5	6	7	8	9	10	Ave.	% Dev.	95% Value	105% Value	Sensor
1	860	857	854	853	860						857	0,38	814	900	
2	1407	1362	1383	1359	1392						1381	1,47	1312	1450	
3	1824	1837	1849	1835	1784						1826	1,37	1735	1917	
4	2149	2213	2208	2224	2177						2194	1,40	2084	2304	
5	2500	2490	2500	2478	2509						2495	0,47	2371	2620	
6	2777	2852	2812	2827	2823						2818	0,97	2677	2959	
7	3207	3237	3166	3210	3182						3200	0,86	3040	3360	
MEASURED VALUES 2. Gear [Nm]										EVALUATION					
St.	1	2	3	4	5	6	7	8	9	10	Mittel	% Abw.	95% Wert	105% Wert	Sensor
1	346	343	352	342	345						346	1,11	329	363	
2	533	524	532	544	532						533	1,34	506	560	
3	621	636	618	619	636						626	1,44	595	657	
4	771	788	798	787	786						786	1,23	747	825	
5	865	873	884	877	886						877	0,97	833	921	
6	988	981	997	988	1018						994	1,44	945	1044	
7	1108	1104	1089	1089	1122						1102	1,26	1047	1158	

Sensor data sheet (in order to their appearance):

- Torque Sensor, Lorenz Messtechnik D-2271, SN: 102552, 15000 Nm
- Torque Sensor, Lorenz Messtechnik D-2268, SN: 104305, 2000 Nm

All measured values in this document are executed with a regular proofed calibration equipment.  
So that the lead back to ISO 9000 ff are guaranteed.

LPU: 20110117

- 1 Secure DataMatrix Code
- 2 Individual factory calibration certificate for every planetary gear torque wrench with individual serial number for clear identification
- 3 Transparency and safety results from deviation data taking the efficiency into consideration
- 4 Various languages available on request
- 5 Three to five complete measurement series per torque level depending on the device type
- 6 The torque values are duplicated on the tool label:

	1. GANG	1. GEAR
	1. VITESSE	
1	857	Nm
2	1381	Nm
3	1826	Nm
4	2194	Nm
5	2495	Nm
6	2818	Nm
7	3200	Nm

**GEDORE**

Ser.-Nr. DA09.00107

GEDORE Torque Solutions GmbH  
 Bertha-Benz-Str. 12, 71665 Vaihingen/Enz  
 T. + 49 70 42/94 41-0

Made in Germany

2. GANG 2. GEAR 2. VITESSE		
1	346	Nm
2	533	Nm
3	626	Nm
4	786	Nm
5	877	Nm
6	994	Nm
7	1102	Nm

**GEDORE**

Mj. 2018 Pmax. 560W  
TYP LDA-22 €€

[www.gedore-torque-solutions.com](http://www.gedore-torque-solutions.com)  
Made in Germany

Individual factory calibration certificate for all planetary gear torque wrenches in the series:  
GDA, GDA Solution, LDA/LAW, LDA/LAW Solution, LDE/LEW, LPK/LPK-X, LKV, LDB and LHD  
Tested on standard or original bolts.

We recommend annual tool calibration of the devices, a new factory calibration certificate can be issued following this inspection if required.





## SPECIAL SOLUTIONS FOR CUSTOMER SPECIFIC REQUIREMENTS

GATE VALVE WRENCH  
LDA-S SOLUTION



GATE VALVE WRENCH  
LAW-S SOLUTION



GATE VALVE  
WRENCH LDA-S



GATE VALVE  
WRENCH LAW-S



GATE VALVE  
WRENCH LDE-S



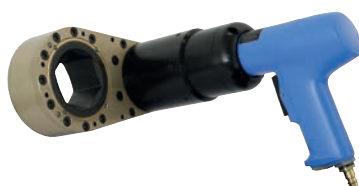
GATE VALVE  
WRENCH LEW-S



SIDE POWER  
WRENCH LES



SIDE POWER  
WRENCH LPS



HEAVY DUTY  
TORQUE WRENCH  
LHD



# THE NEW GENERATION LDA-S SOLUTION/LAW-S SOLUTION

## BREAKAWAY TORQUE UP TO 1.200 NM



**+** **Display**  
Sunlight-readable colour display

**+** **Counter-bidirektional**  
Digital and integrated, no separate accessories necessary

**+** **USB interface**  
For data transmission

**+** **Silicone protective cover**  
Protected display unit through silicone protective cover

**+** **Breakaway torque**  
Infinitely adjustable breakaway torque for individual settings on your gate valves

**+** **Low-maintenance**  
Brushless Technology

**+** **Documentation**  
The documentation of over 10,000 gate valve movements and the pre-defining of gate valve numbers with the DOCU module.

**+** **Battery performance**  
System power: 270 Wh  
Powerful 90 Wh (18V/5Ah) Lithium-Ion battery with integrated charge level indicator



**Series LAW-S Solution**

Gentle opening and closing of gate valves

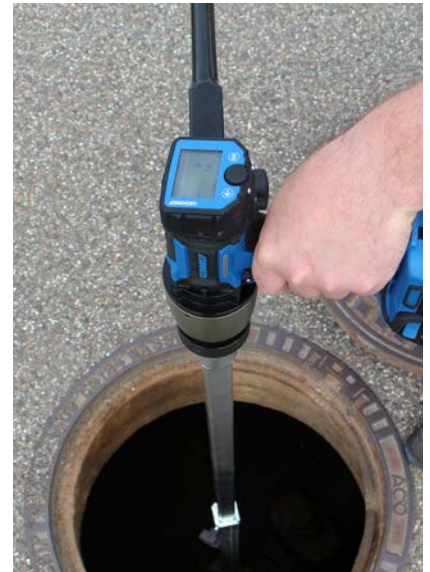


### Flexible. Solid.

- › Weight-optimised without compromising on convenience or the necessary safety
- › Motor unit featuring 360° rotation for ergonomics that can be adapted to your application
- › Ergonomic grip for safe & non-fatiguing use
- › Impact-free and accident-free work, even with sluggish gate valves

### Reliable. Powerful.

- › Work fast and reliable
- › The electronically infinite torque settings and the soft start-up behaviour of the motor make an unexpected tearing away of the gate valve spindle impossible
- › Smooth electronic switch-off prevents over-twisting in jerky movements
- › Benefit in terms of work safety, flexibility and time when opening and closing the gate valves in your pipe network



### The new gate valve machine with documentation module

The new LDA-S Solution gate valve wrenches, an in-house development, is equipped with a documentation module for quality assurance and a sunlight-readable, intuitively operated colour display. With its powerful 90 Wh lithium-ion battery, microprocessor electronics and brushless technology, the LDA-S Solution achieves a breakaway torque of up to 1,200 Nm.

### Conforms to the highest standards

The data transfer of all gate valve movements via USB interface at the end of the working day is flawless and complete with the LDA-S Solution.



### DOCU documentation module

The DOCU documentation module makes it possible to document more than 10,000 gate valve movements. In addition, it serves for quality-assuring archiving of your completed work.



Proven system sequence by means of digital color display

For maximum precision, the LDA-S Solution offers a visual and acoustic zero-defects strategy: a sunlight-readable, digital colour display visualises the entire work workflow; in addition, an acoustics signal sound as soon as the set value is reached. Easy operation due to self-explanatory operator guidance. The menu language can be set optionally.

Two modes: gate valve mode + countdown

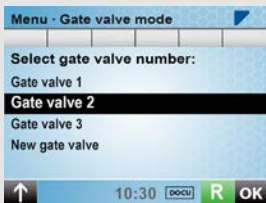
After entering the cut-off torque, the LDA-S Solution switches off automatically in gate valve mode when the specified torque is reached. In the countdown mode, the desired number of revolutions can be specified. After reaching the selected number of revolutions, the device switches off automatically.



The display and its functions:



Main menu



Select gate valve number



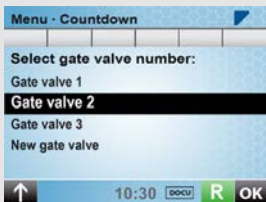
Enter cut-off torque



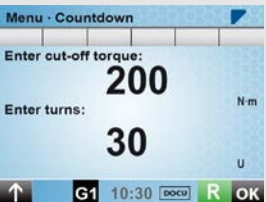
Cut-off torque reached



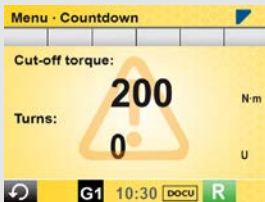
Main menu



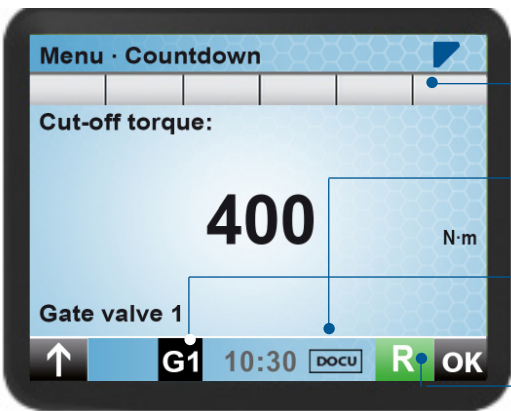
Select gate valve number



Enter cut-off torque resp.  
enter turns



Enter turns resp.  
enter cut-off torque



- + Toolbar shows status of the device (USB connection, thread direction, temperature)
- + Active module DOCU (documentation)
- + Gear display
- + Direction of rotation

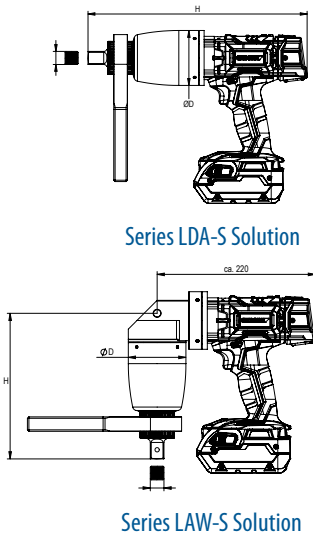


- + Silicone protective cover display unit
- + 2 " high resolution LCD colour display with impact resistant macrolon protection screen
- + OK-button
- + Back-button
- + Setting wheel for easy selection of bolt cases and torque values
- + USB-interface for data transmission

Technical Data

Type	~ Nm max* <sup>1</sup>	~ U/min* <sup>2</sup>	~ lbf·ft max* <sup>1</sup>		Ø D mm	H mm	kg
LDA-05S Solution	500	46	369	¾"	80	294	3.4
LDA- 07S Solution	700	29	516	¾"	80	326	4.0
LDA-09S Solution	900	23	664	¾"	80	326	4.0
LDA-12S Solution	1.200	20	885	¾"	80	326	4.0
LAW-05S Solution	500	46	369	¾"	80	190	4.7
LAW-07S Solution	700	29	516	¾"	80	223	5.3
LAW-09S Solution	900	23	664	¾"	80	223	5.3
LAW-12S Solution	1.200	20	885	¾"	80	223	5.3

\*<sup>1</sup> Breakaway torque in 1 st gear, \*<sup>2</sup> 2nd gear max. \*With lithium-ion-battery (740g), without reaction arm  
All information without guarantee. Subject to technical modifications.

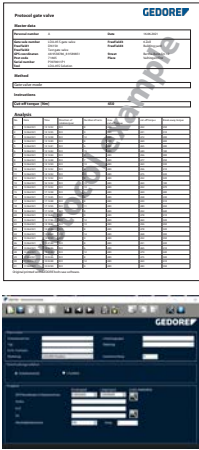


DOCU documentation module for quality assurance

With the DOCU module, gate valve movements can be traced back. During the gate turning process, the data is documented and then exported to a PC. From there, a gate valve log can be created and archived. This reliably documents that all gate valve rotations were carried out with the specified settings. The encrypted log file ensures that manipulation of the documentation data is impossible. The DOCU module enables the documentation of more than 10,000 gate valve movements and is used for quality-assured archiving of your completed work. The DOCU module can be switched on and off as required with password protection.

Quality management module DOCU for definition and documentation

The DOCU module can also be used to define and assign gate valve numbers. The gate valve numbers and values are defined on the PC via our bolting application software. You decide between gate valve operation or countdown function, new gate valve numbers can be defined at any time. In addition to the torque specifications, the GPS coordinates or the address of the gate valve can also be defined. The data transfers of all gate valve movements via USB interface at the end of the working day are faultless and complete with the LDA-S Solution.



Scope of delivery

- › Device
- › Reaction arm, straight (light alloy)
- › 3x Lithium-ion battery (90 Wh/18 V/5 Ah)
- › Charger 220–240 V; 50/60 Hz
- › Tool box
- › Operation manual
- › Silicone protective cover display unit
- › Module LA-S.DOCU incl. USB cable



Optional accessories

- › Reaction arm in double (light alloy)
- › Slide rod rigid (950mm long)
- › Telescopic slide rode
- › Hand lever extension for telescopic slide rode
- › Hand lever extension (approx. 800 mm long)
- › Hand lever extension heavy (approx.1.000 mm long)
- › Car charger
- › Connector ¾" iVk x 20mm iVk
- › Adapter ¾" iVk to multi tooth
- › Adapter ¾" on conical square drive; 32 or 50 mm
- › Cardan joint
- › Cardan joint ¾" with adapter to support with telescopic rod
- › Hand wheel adapter
- › Level round



# THE GATE VALVE WRENCHES

## SERIES LDA-S, LDE-S, LEW-S

Microprocessor-controlled switch-off electronics

Brushless Technology low-maintenance

Torque values readable on the label

Gentle opening and closing of gate valves

System power: 270 Wh  
Powerful 90 Wh (18 V/5 Ah)  
lithium-ion battery

Ergonomic grip for safe & non-fatiguing use

Infinitely adjustable breakaway torque for individual settings on your gate valves


With LED status signal

Optional: counter – bidirectional

LDE-S (electric)  
Display with integrated counter

LEW-S (electric)

1. Gang		2. Gang	
1	250 Nm	1	180 Nm
2	350 Nm	2	200 Nm
3	470 Nm	3	220 Nm
4	550 Nm	4	240 Nm
5	680 Nm	5	260 Nm
6	790 Nm	6	280 Nm
7	950 Nm	7	300 Nm





## Open every gate valve with these tools

Our gate valve wrenches are derived from the development of precision torque wrenches. Once again, unnecessary weight has been saved in this new generation. At the same time, the mountings of the moving parts in the rugged planet gear unit were improved, leading to an enormous increase in service life of the entire machine.

## Impact-free and accident-free work, even with difficult gate valves

Our gate valve wrenches work fast and reliable. The electronically infinite torque settings and the soft start-up behaviour of the motor make an unexpected tearing away of the gate valve spindle impossible.

## Optimal working weight of just 3.9 kg with a breakaway torque of over 900 Nm

Our gate valve wrenches are consistently weight-optimised without losing any operating comfort or the necessary safety. The complete motor unit can be rotated through 360° in all models and adapts comfortably to your application. The reaction forces are securely accommodated by the device. The operator can easily open even jammed gate valves.

## Various drive systems for flexible applications

The gate valve wrenches are available with electric or cordless power systems. Determine for yourself about the gain in output, safety, flexibility and time when opening/closing your gate valves in your pipe network.



# SERIES LDA-S

## Robust battery technology for gate valve wrenches

The cordless gate valve wrench battery equipment is a real highlight under the gate valve wrenches.

Battery-operated but just as strong as a mains-based AC wrench, it provides a powerful breakaway torque of max. 1000 Nm.

## Flexible maintenance work and pipe network maintenance

From now on, you can work with your gate valve wrench whenever you want, wherever you want and as long as you want to.

Even with this design, the torque can be reduced during operation without reducing the speed until the best possible security is achieved for the gate valve and the operator.



### Scope of delivery

- › Device
- › Reaction arm, straight (light alloy)
- › 3x Lithium-ion battery (90 Wh/18 V/5 Ah)
- › Charger 220-240 V; 50/60 Hz or 110-120 V; 50/60 Hz for USA
- › Tool box
- › Operating instructions

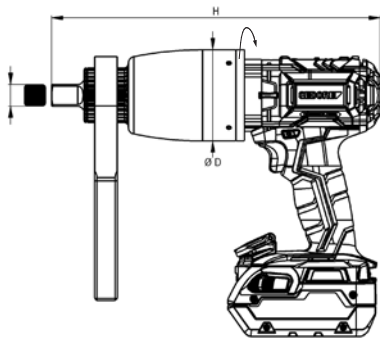


### Optional accessories

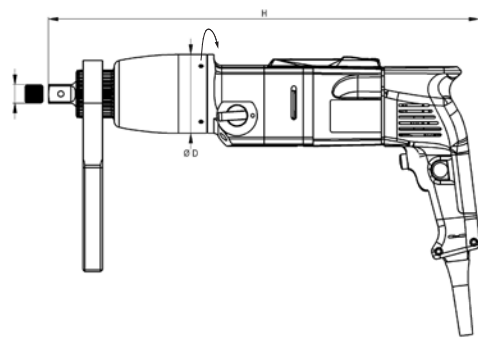
- › Reaction arm double-sided version
- › Telescopic slide rod
- › Hand lever extension (approx. 800 mm long)
- › Fixed slide rod (approx. 950 mm long)
- › Charger with 12/24V connector (specifically LDA-S)
- › Counter – bidirectional
- › Adapter 3/4" on conical square drive; 32 or 50 mm
- › Cardan joint
- › Hand wheel adapter



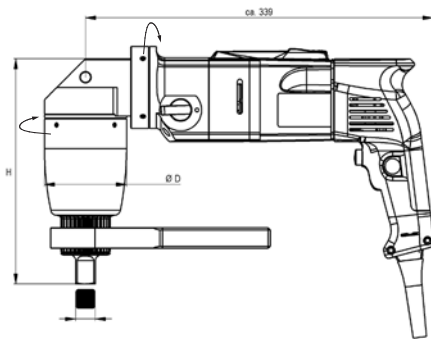
\*Illustration similar





LDA-S – battery-operated



LDE-S – electric straight version



LEW-S – electric angled version

Typ	~ N·m max <sup>*1</sup>	~ lbf·ft max <sup>*1</sup>	~ U/min		Ø D mm	H mm	 <sup>*2</sup>
LDA-05S	500	370	46	3/4"	80	255	3.3 <sup>*3</sup>
LDA-07S	700	520	29	3/4"	80	287	3.9 <sup>*3</sup>
LDA-09S	900	670	23	3/4"	80	287	3.9 <sup>*3</sup>
LDE-075S	770	570	25	3/4"	80	440	5.1
LDE-09S	900	670	17	3/4"	80	440	5.2
LEW-09S	900	670	18	3/4"	80	220	6.5

<sup>\*1</sup> Breakaway torque in 1st gear    <sup>\*2</sup> Without reaction arm  
The continuous sound pressure as per DIN 455635 is < 70 dB(A)

<sup>\*3</sup> With Battery: 740g  
All rights reserved. Subject to modifications without prior notice.

Other torques on request    Vibration is less than 2.5 m/s<sup>2</sup>

NEW:

We have extended our gate valve wrenches by one function  
Earth anchor insertion made easy

Flexible and easy insertion of earth anchors up to approx. 1m\*, for example for signs, Fence, GaLa construction, masts and much more.

With optional accessories to make work easier into the earth anchor:

- › Adapter 3/4" iVk with toothing
- › Hand lever extension heavy version (approx. 1000 mm long)
- › Level round
- › Cardan joint 3/4" for support with telescopic slide rod



# THE SIDE POWER WRENCH

## LES/LPS SERIES

Patented switch-off electronics protected against spray water and moisture

+

Infinitely adjustable torque settings with electronic overload protection

+

Display with integrated counter and countdown function

+

Optimised design enables space-saving positioning parallel to the tie rod

+

Torque values readable on the label

+

Braked 360 ° pivoting drive unit enables simple positioning on the tie rod

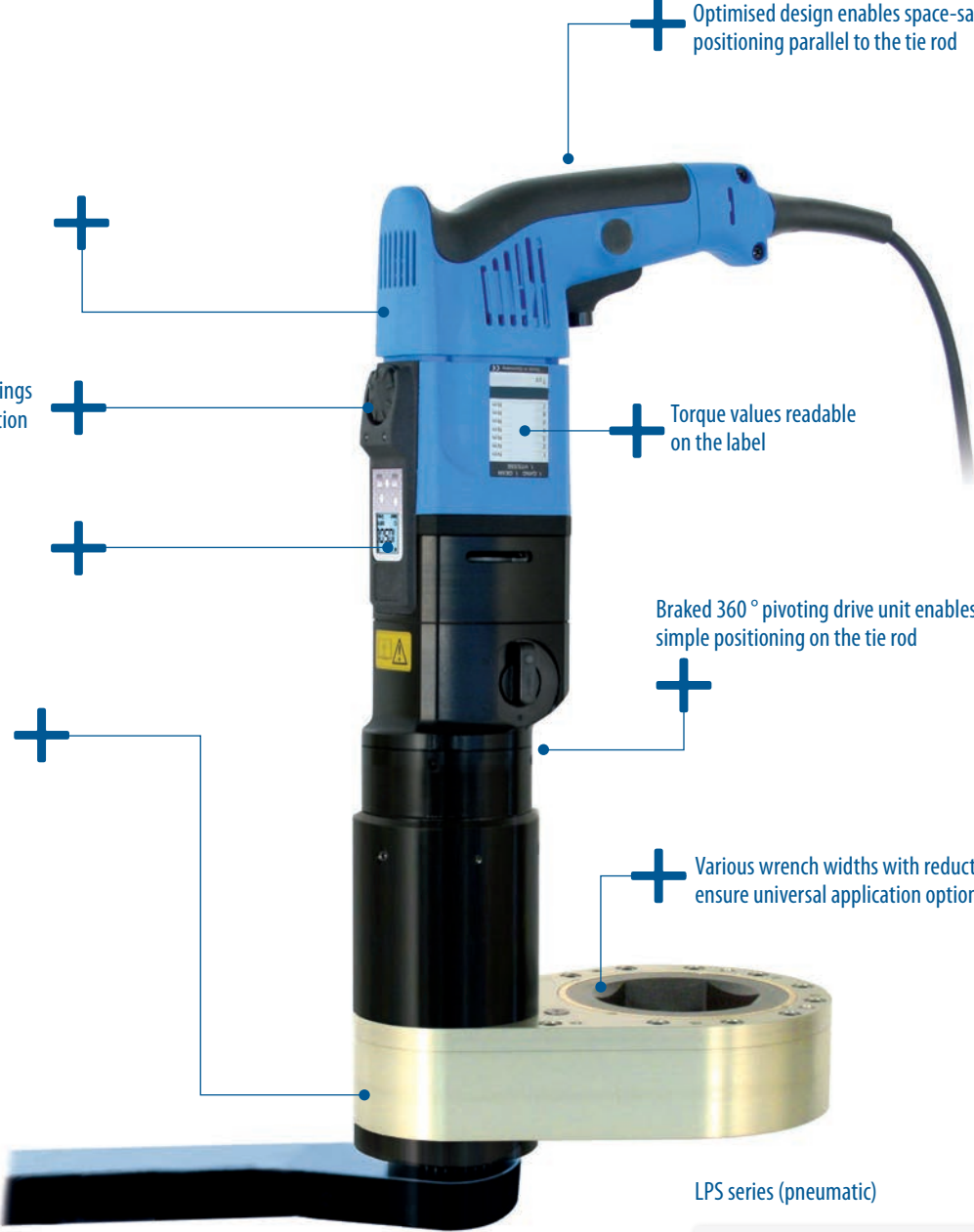
+

Various wrench widths with reduction inserts ensure universal application options


+

Patented tandem gear pulley for secure transmission of large torques up to 4800 Nm


+



LES-09 series



LPS series (pneumatic)



Accessories: Hexagon adapter

⬡	36 mm	41 mm	46 mm	50 mm	55 mm	60 mm	65 mm	70 mm	75 mm	80 mm
55	•	•	•							
60	•	•	•	•	•					
70	•	•	•	•	•					
80	•	•	•	•	•	•	•	•		
95						•	•	•	•	•

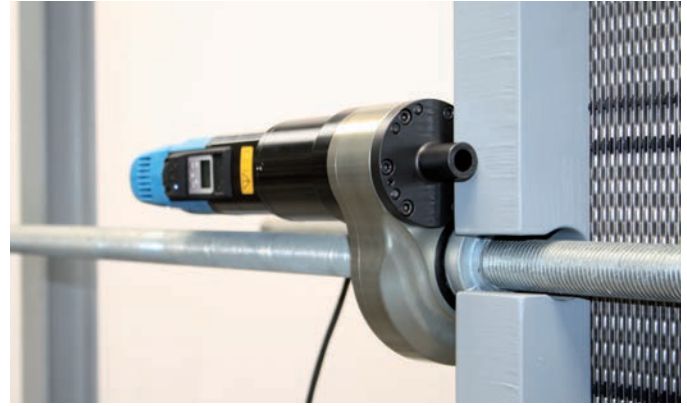


### Specially developed for working on plate heat exchangers

We have specially developed various series of side power wrenches in this sector for the safe assembly and disassembly of plate heat exchanger systems. They work fast and reliable, are weight-optimised and designed to be user-friendly.

Regardless of whether your exchanger systems are equipped with or without thrust bearings, we have the appropriate system for all types to make your work as easy and comfortable as possible.

Our side power wrenches are available with electric or pneumatic drives.



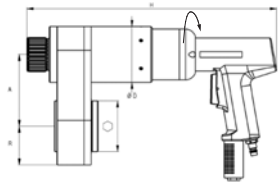
### The alternative for smaller plate heat exchangers

The LES-09 model is our entry model with a torque up to 1600 Nm. These side power wrenches are impressive because of their practical and simple operation, particularly for smaller plate heat exchanger versions.

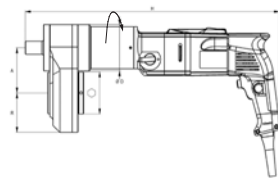
High-performance aluminium ensures lower weight and the rotating hand grip adapts individually to the requirements of the user. The enormous bolting speed that is characteristic.

The set includes a hexagon adapter for the next smallest wrench width, including the holder for attaching the adapter to the basic unit.

### Technical data



LPS - pneumatic



LES - electric

Type	~ N·m max <sup>*1</sup>	~ lbf·ft max <sup>*1</sup>	~ U/min <sup>*2</sup>	mm	A/R mm	H mm	kg <sup>*3</sup>
LPS-1/60	3000	2200	7	60	112/61	396	10.0
LPS-1/80	3600	2650	5	80	118/75	396	12.0
LPS-1/95	4800	3500	4	95	135/95	396	13.0
LES-16/60	3000	2200	7	60	112/61	503	11.1
LES-16/70	3600	2650	5	70	118/75	503	11.7
LES-16/80	3600	2650	5	80	118/75	503	11.7
LES-16/95	4800	3500	4	95	135/95	503	13.6
LES-09/55	1600	1180	13	55	86/75	480	10.0
LES-09/60	1600	1180	13	60	86/75	480	9.8

<sup>\*1</sup> Series LES: Breakaway torque in 1st gear

<sup>\*1</sup> Series LPS: Breakaway torque at 7 bar

The LES-09 series is supplied with a support plate (reaction arm not required)

<sup>\*2</sup> Series LES: Maximum speed in 2nd gear

<sup>\*2</sup> Series LPS: Maximum speed at 7 bar

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<sup>\*3</sup> Without reaction arm

Vibration is less than 2.5 m/s<sup>2</sup>



### Scope of delivery

- › Device
- › Reaction arm, straight (light alloy) (only LES-16/LPS-1)
- › 1x Hexagon adapter (only LES-09)
- › 1x Holder (only LES-09)
- › Tool box
- › Operating instructions



### Optional accessories LES/LPS

- › Reaction arm cranked with lock on function made of chrome vanadium steel (only LES-16/LPS)
- › Hose (4 m, only LPS)
- › Maintenance unit (only LPS)
- › Further hexagon adapter
- › Further holder



The new heavy duty screwdriver up to 7500 Nm

The new torque wrench, combining power and speed: more than twice as fast as other suppliers - for a faster insertion bolt by bolt.  
Reliable operation in all weathers.

The built-in, low-maintenance brushless technology (brushless, low-wear DC drive) ensures a longer tool life.

Proven system process with digital colour display

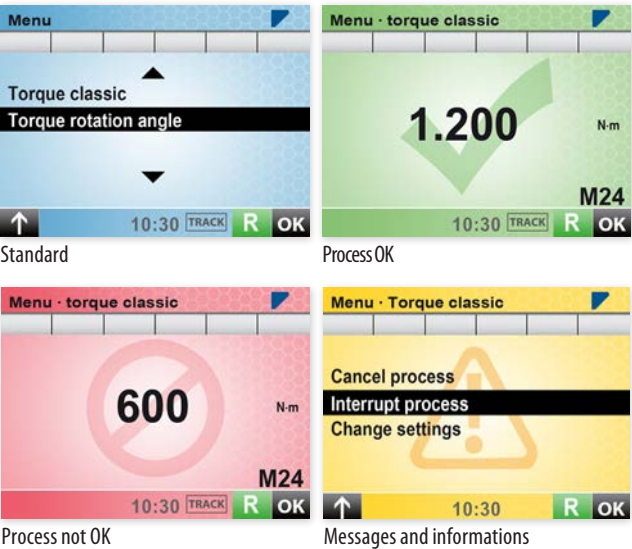
For maximum precision, the LHD offers an visual and acoustic zero-defect strategy: a sunlight-readable, digital colour display displays the entire workflow visually; in addition, an acoustic signal sounds as soon as the set value is reached.  
(Further information on page 16)

Bolting software for data logging and quality assurance archiving

The logging of more than 10,000 bolted connections is possible with the optional available module TRACK. With the optional QS module, any number of bolted connections can be defined and stored. This greatly simplifies work on the construction site and reduces the time required.

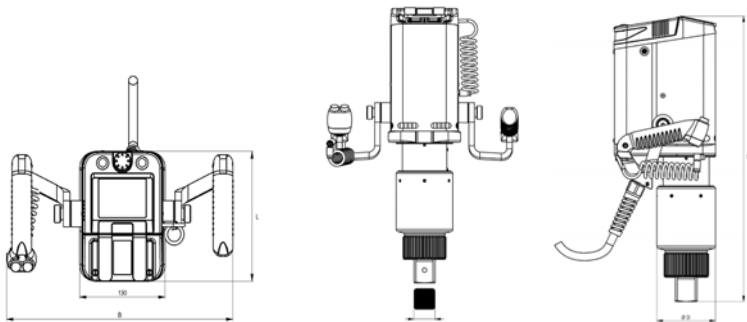
Powerbox + accessory case for cable

Due to strong voltage fluctuations it is difficult to use electrically torque wrenches with the required accuracy. With the LHD heavy duty torque wrench, this is avoided by a voltage conversion using our power box - this way the device is always provided with the necessary voltage for proper function.



Technical Data

More information about documentation modules see pages 54/55



Type	~N-m min/ max	~ lbf-ft min/ max	~ U/min	■	Ø D mm	L mm	B mm	H mm	⚖ kg
LHD-75	800 - 7500	590 - 5530	10,3	1½"	102	175	345	497	14.6

Further torque ranges on request.

Type	Input voltage	Output voltage	P	L mm	B mm	H mm	⚖ kg
Powerbox	180–264 V AC / 47–63 Hz	48 V DC	3.000 W	380	445	160	9.4

Protection: IP32      Protection class I



# YOUR SPECIALIST IN HIGH LEVEL TORQUE BOLTING TECHNOLOGY



## From pioneer to high-tech centre

For more than 45 years, we have represented quality and innovation in all areas of bolting technology.

A range manufactured on almost 90 %, state-of-the-art machining centres ensures the outstanding quality and precision of our torque wrenches.

The difference is simply in the detail. Our machines are Made in Germany.

## We develop the torque wrenches for your future

Our specialists develop your torque wrenches with state-of-the-art construction and analysis methods (CAD/CAM/FEM). If a suitable solution is not available in our product range, we can design a specifically customised solution for you. Your applications are our challenge.



## Precision testing before shipping

In our own calibration laboratories, all dynamic devices are precisely measured and configured before they are sent to you. The torque deviation is usually significantly under 3% for identical bolting operations.

The individual factory calibration certificate is the confirmation that is required by every QM system as per DIN EN ISO 9001:2008.

# CONSULTATION AND TRAINING BY SPECIALISTS



## Always the right solution for you

Our experts can advise you on site and analyse your application with you in order to offer the appropriate system.  
Our extensive range of products, offers you the professional solution required.

## In-house training

Customer safety instructions and training courses are available at our in-house training centre. Every participant is subsequently issued with a certificate as verification of training.



# A SELECTION OF OUR CUSTOMERS AND THEIR PRODUCTS



## Donges SteelTec GmbH

Donges SteelTec GmbH is a member of the Mutares Group and is one of Germany's leading steel construction companies with approximately 200 highly qualified employees. The Darmstadt-based company operates nationally and internationally. The focus is on steel bridge construction and steel building construction. (Source: Donges SteelTec GmbH)



LDA



LDH



LHM



## Putzmeister Holding GmbH

Putzmeister develops, produces, sells and serves its customers worldwide with technically high-quality and service-oriented machines in the areas of concrete delivery, truck-mounted concrete pumps, stationary concrete pumps, placing booms and accessories, plant engineering, pipe conveying of industrial viscous materials, concrete paving and overburden conveying in tunnels and underground, robot and handling technology, mortar machines, plastering machines, screed conveying, injection and special applications. (Source: Putzmeister Holding GmbH)



LDA



LPK



LDE



LKV



LDH



LHM



## thyssenkrupp Industrial Solutions AG

ThyssenKrupp Fördertechnik is one of the world's leading suppliers of machines, plants and systems for the extraction, processing and handling of raw materials. In open-cast mining and quarries, in port terminals, coal-fired power stations and in storage areas, ThyssenKrupp Fördertechnik systems are in use worldwide and continue to set new standards. (Source: thyssenkrupp Industrial Solutions AG)



LDA



LPK



LDE



LEW



LDH



LHM



## API Schmidt-Bretten GmbH & Co. KG

API Schmidt-Bretten is a worldwide recognized manufacturer of gasketed and welded plate heat exchangers and systems for the thermal treatment of pumpable media in all major markets. (Source: API Schmidt-Bretten GmbH & Co. KG)



LES

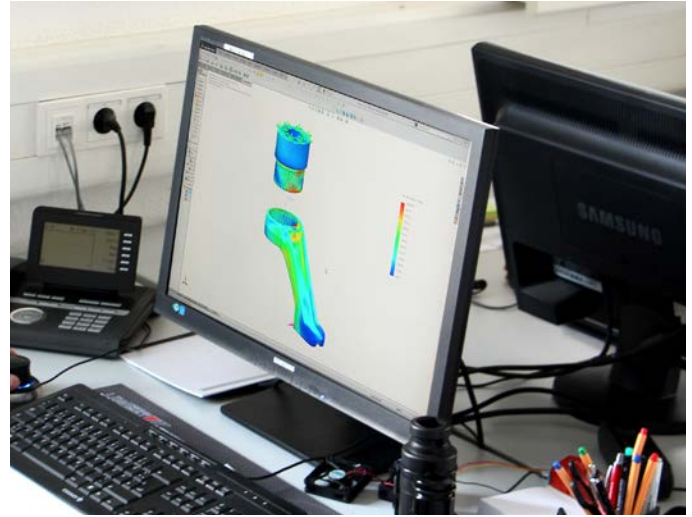


LPS

## SPECIAL REACTION ARM VERSIONS

The reaction arm of a high-torque wrench is one of the most important components on the device. It absorbs all reaction forces produced during bolting operations. It therefore has to be stable. In addition, reaction arms require a place in their surroundings where they can support themselves. Therefore, they not only need to be stable, but also suitable for a variety of environments.

As bolts can be located anywhere, it is possible that the standard reaction arm does not always fit and only a custom design will correctly absorb the reaction force. We specialise in the design of custom reaction arms. Custom reaction arms can be built and force effects simulated (FEM) in our own engineering department in Vaihingen/Enz.



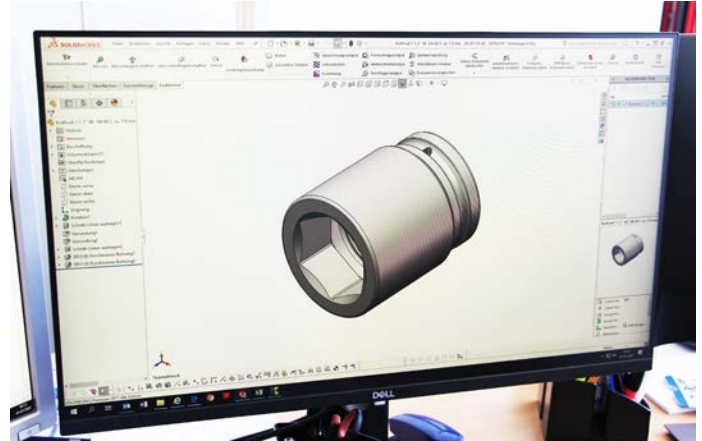
### Special reaction arms



## VARIOUS ADAPTERS AND INSERTS

The choice of the right impact socket is particularly important, especially with regard to occupational safety. A suddenly breaking socket can not be foreseen - serious hand and eye injuries are often the result. You do not have to expose yourself to this risk!

Accessories are most important if the tool is to be optimally adapted to the specific assembly situation. Select the appropriate mounting or insert in various width across flats, shapes and lengths. We have the right accessories for our tools for every situation. We would be happy to advise you!



The complete programme of **SOCKETS AND INSERTS** can also be viewed at [www.gedore.com](http://www.gedore.com) or in the current **GEDORE CATALOGUE**



### Impact socket

Some of our sockets are available with Impact-Fix lock, quick and easy to handle.



Standard version



Conical version



Short version



Long version

### Torx socket

Inside square inserts and holders

Hexagon socket inserts and holders



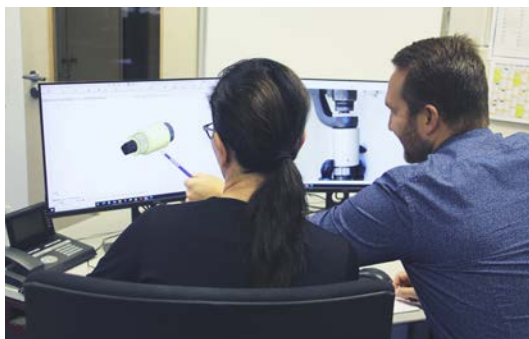
# WE ALWAYS FIND THE RIGHT (BOLTED) SOLUTION FOR YOU

Made in Germany

With over 50 years of experience in bolting technology, we are your reliable partner in every (bolting) case.  
Contact us, we will develop your individual (bolting) solution. We accompany you from your question to our answer.

## Development

In our own development department  
the products of the future are created.



## Production

With a vertical range of manufacture  
up to 90%, we produce to the  
highest quality standard.

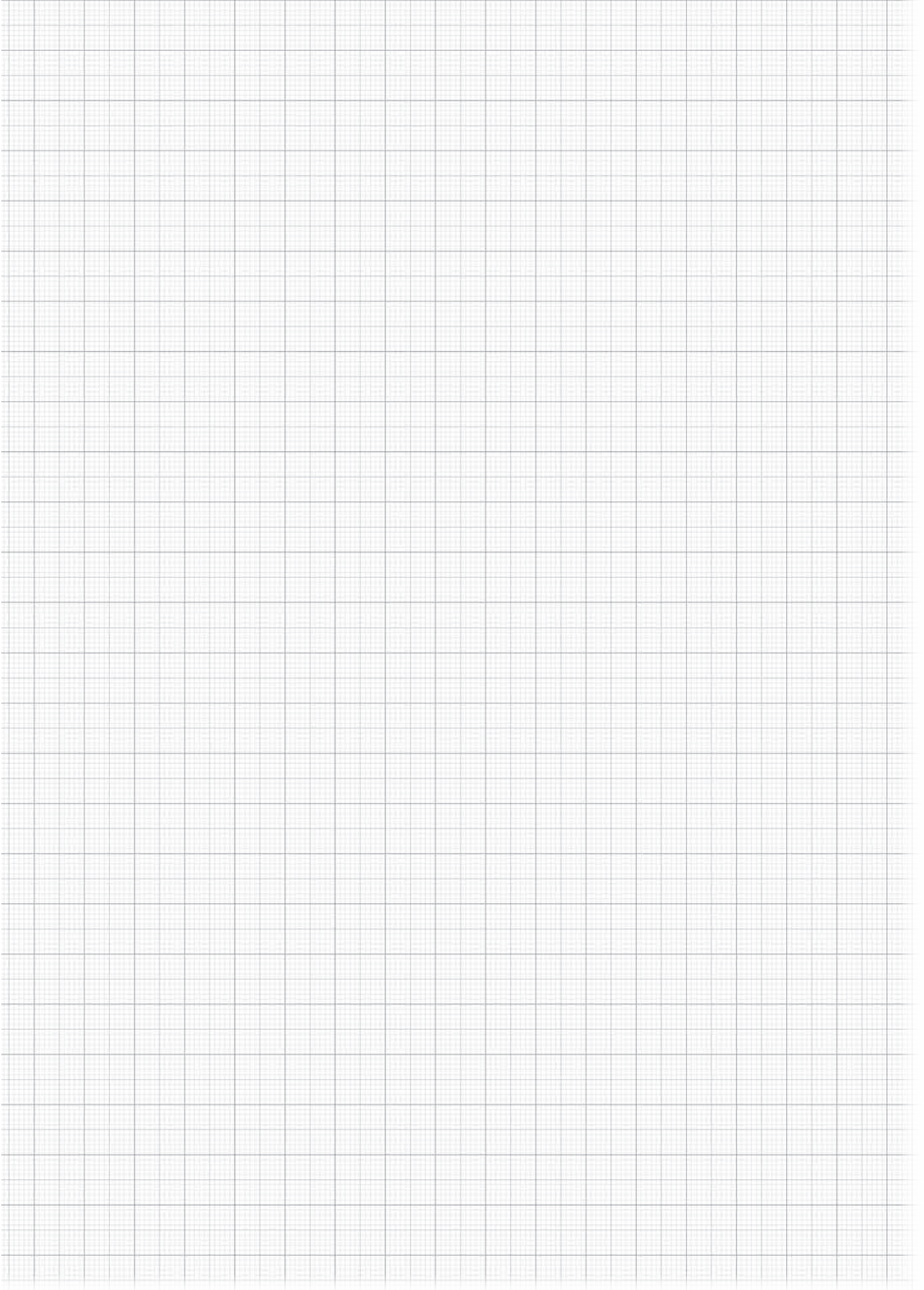
## Challenge

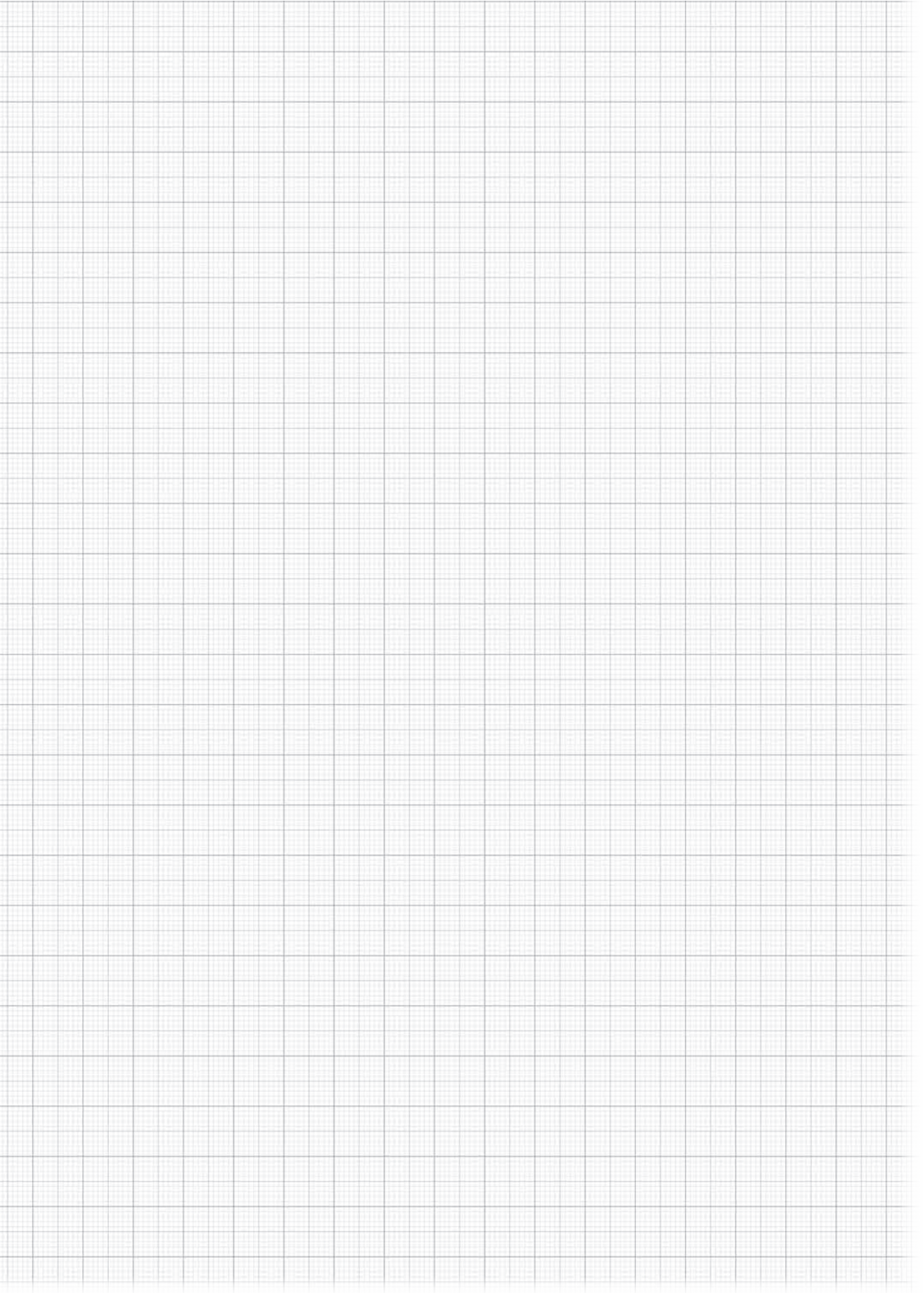
Your bolting problem is our challenge.  
Talk to us, we will find a suitable solution  
together with you.



## We got a solution

We are pleased to be able to help you  
to solve your bolting problem on site.







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