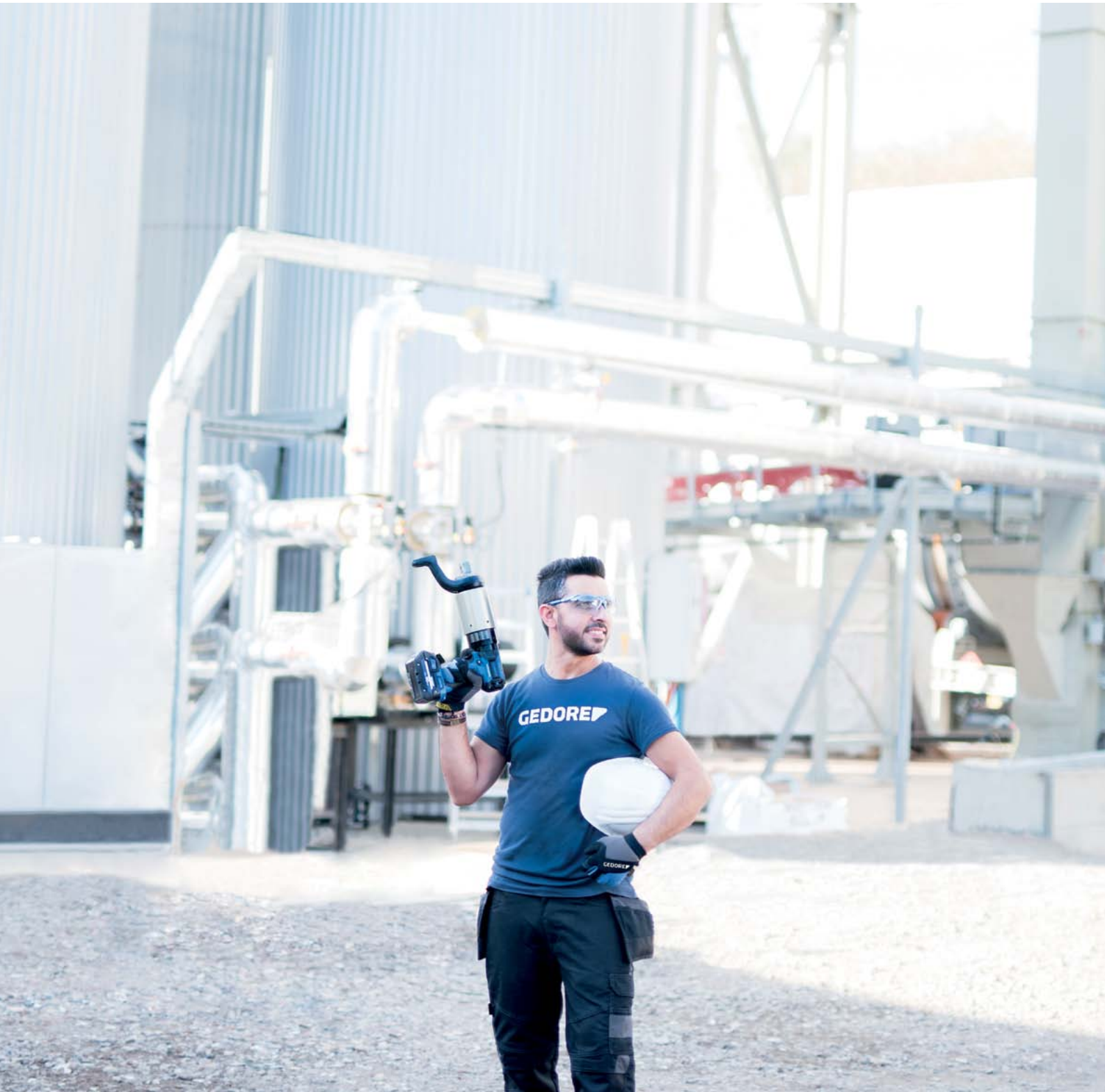
GEDORE
TOOLS FOR LIFE

GEDORE TORQUE SOLUTIONS



HIGH-LEVEL CORDLESS TORQUE WRENCH WITH COLOUR DISPLAY

LDA SOLUTION up to 13 000 Nm

Dear customers, business partners,
and tool users,

GEDORE Torque Solutions presents the new generation of its powerful **LDA high-level cordless torque wrench** up to 6000 Nm. The compact and lightweight devices with low maintenance brushless technology makes bolting tasks even easier and more efficient.

Our products remain innovative, demanding and benefit from 45 years of concentrated expertise in toolmaking and high level torque bolting technology.

Discover the innovation **LDA Solution** with a torque range up to 13 000 Nm, a sunlight-readable **colour display** and the possibility of complete **data logging** of your bolted connections with the industry standard VDI/VDE 2862 according to the highest quality standards.

Our cordless **Railway Torque Wrench LDB-10**, awarded with the Competence Prize for Innovation and Quality Baden-Württemberg 2015, will continue to be a battery-driven lightweight (only 17.2 kg) suitable for one-man operations replacing the classic bolting machine, impact wrench and sleeper drill.
In 2017 the LDB-10 was released as one of the first tools from the 1 % and 5 % prescribed check (valid for Deutsche Bahn).

The latest generation of high-speed bolting also comes from **GEDORE Torque Solutions GmbH**.
Our **LHD** with detachable magnetic display and adjustable handles combines power and speed: for a faster insertion bolt by bolt. With powerful 7 500 Nm it defies wind and weather.

You can find out more about these products on the following pages.

We hope you enjoy browsing through the new catalogue.

YOUR GEDORE TORQUE SOLUTIONS GMBH TEAM OF EXPERTS

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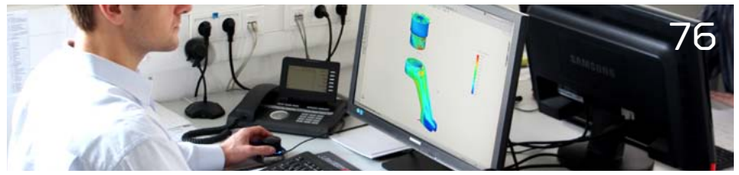


OUR NEW INNOVATIONS

LDA/LAW Solution up to 13000 Nm with colour display and data logging

Our latest innovation – the LDA Solution with sunlight-capable color display, low-maintenance brushless technology and a documentation function for controlled and safe working in all situations.

- Torque range 150–13 000 Nm
- Brushless Technology – low-maintenance
- Digital, sunlight-readable colour display with intuitive system guidance
- The independent fan cools the motor even during downtime
- Complete system designed and manufactured in Germany
- Module TRACK: Documentation of more than 10 000 bolting connections
- Module QS: Documentation and pre-definitions of bolting systems
- USB interface for data transmission
- Repeatability tolerance less than +/- 3 %
- Defined tightening with torque angle mode
- Complys with VDI/VDE guidlines 2862
- Live torque measurement on request and subject to availability

Further information on pages 14-17.
For a detailed, individual presentation of our torque wrench LDA Solution please contact us.

See for yourself – take a look at our new LDA Solution-Video!

New generation of the LDA/LAW series ergonomic, powerful and lightweight

With low-maintenance brushless technology and new ergonomic design we present the LDA high-level cordless torque wrench up to 6 000 Nm in a new generation. Intelligent, flexible and smaller than it predecessor whilst lighter and more powerful. The desired torque range can be adjusted in steps. Powerful drive is provided by the efficient and fast brushless motor with 2-speed gearbox and powerful 270 Wh system power.

- Torque range from 90-6 000 Nm
- Brushless Technology – low maintenance
- Stepped torque adjustment
- Ergonomic handle for safe & non-fatiguing use
- System power of 270 Wh with three powerful lithium-ion batteries (90 Wh/18 V/5 Ah)
- Repeatability tolerance less than +/- 3 %
- Also available in angled versions

Further information on pages 10–13.
For a detailed, individual presentation of our torque wrench LDA please contact us.

See for yourself – take a look at our new LDA-Video!

The heavy duty torque wrench with magnetic colour display and adjustable handles

Our LHD with detachable magnetic display and adjustable handles combines power and speed: for a faster insertion bolt by bolt. More than twice as fast than other suppliers when docking - for a faster reset from bolt to bolt.
The Brushless Technology ensures a longer service life of the torque wrench.
Due to strong voltage fluctuations it is often impossible in the wind power sector to use electrically driven bolting equipment with the required accuracy.
This is avoided with the LHD bolting device by a voltage conversion using our Powerbox - this way the bolting device is always provided with the necessary voltage for correct performance.
With detachable, magnetic display and adjustable handles, the LHD scores in terms of flexibility and accuracy.

- Torque range: 800–7 500 Nm
- Process-safe working in wind and weather
- Documentation of more than 10 000 bolt-connections (module TRACK) – optional
- Documentation and pre-defining of different bolting operations (module QS) – optional
- Torque
- Torque angle – optional
- Inductive interface for data transmission
- Torque adjustment in 10 Nm steps
- Removable, magnetic display with cable length of 2m
- Adjustable handles for easier work and optimal power distribution in every situation
- Optical and an acoustic zero-error strategy
- Repeatability tolerance less than +/- 2 %

Further information on pages 72–73.
For a detailed, individual presentation of our Heavy Duty torque wrench LHD please contact us.

Exemption from the prescribed check for railway torque wrench LDB-10 (valid for Deutsche Bahn)

Basically, new bolted connections on rail tracks should be documented and randomly tested. As one of the first maintenance tools, the LDB-10 Universal railway torque wrench has now been relieved of the 1 % an 5 % prescribed check. Thus saving considerable amounts of resource and costs to the end user.

Calculation example:

1 km rail = 6.666 bolts
+Verify: 66 or 336 bolts (with 1 % or 5 % prescribed check)

Effort and costs of the prescribed check

2 persons each 1 minute perbolt x 60 €/h = 2 €/bolt

+ 1 km rail = 132,00 € verification costs (with 1 % prescribed check)
+ 1 km rail = 672,00 € verification costs (with 5 % prescribed check)

The LDB-10 amortizes itself after 19 km of rail (with 5 % prescribed check) or 96 km (with 1 % prescribed check)

Further information on pages 70–71.
For a detailed, individual presentation of our railway torque wrench LDB please contact us.

See for yourself – take a look at our LDB-Video!

LDA, LAW, LDA/LAW SOLUTION
CORDLESS TORQUE WRENCH

LDA

SCOPE OF DELIVERY

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

LAW

SCOPE OF DELIVERY

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

LDA/LAW SOLUTION

SCOPE OF DELIVERY

- DEVICE
- REACTION ARM CRANKED
- MODULES TRACK AND QS
- 2 BATTERIES
- CHARGER
- TOOL BOX
- OPERATING MANUAL
- FACTORY CALIBRATION CERTIFICATE

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

LAW series

See for yourself – take a look at our new 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. Once the battery is fully discharged, you can switch to electrical operation thanks to the optionally available hybrid cube.

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.

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.

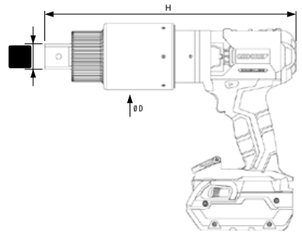
Integrated gear protection and processor-controlled safety

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.

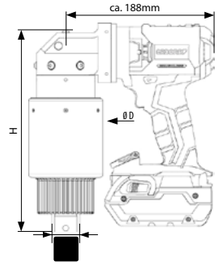
Lies comfortably in the hand

The ergonomic grip is non-slip and fatigue-free 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*1/ max*2	lbf·ft min*1/ max*2	~ U/min	■	Ø D mm	H mm	kg *3
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 ½“	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	450 - 3200	340 - 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 ½“	102	295	9.1

*1 Lowest torque in 2nd gear *2 Maximum torque in 1st gear *3 Without reaction arm with battery Battery: 740g
Vibration is less than 2.5 m/s² The continuous sound pressure as per DIN 455635 is < 80 dB(A)
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
- 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 manual
- 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 bespoken reaction arm design
- Hybrid Cube
- Car charger for 12 V connection

*Illustration similar *Illustration similar

OUR TORQUE WRENCH IN DIFFERENT BOLTING SITUATIONS

Metropol Parasol, Sevilla

The new landmark in Seville, Spain, was mounted with the high-torque cordless torque wrench (LDA). A total of 21900 bolted connections were tightened on the wooden construction.

Source: MERK Timber GmbH

Rhenish lignite mining area

In the Rhenish lignite mining area, complex piping systems run through the openpit mining, which serve for drainage and pollution control. In some areas, steel flanged pipes are being dismantled, which have been used for over 10 years of drainage and installed in the ground. Due to the years of weathering and the resulting corrosion of the bolt connections, disassembly work is often a challenge for these tubes. To solve these bolted connections and to install new lines our LDA is used.

Source: RWE POWER, TAGEBAU HAMBACH

Football stadium TSG Hoffenheim

The roof structure of the football stadium belonging to TSG 1899 Hoffenheim was mounted with our cordless torque wrench.

CORDLESS TORQUE WRECH WITH COLOUR DISPLAY
LDA/LAW SOLUTION SERIES, 150-13000 Nm

Independent fan cools the motor even at downtime

Microprocessor-controlled switch-off electronics

Sunlight-readable colour display for simple operation and control of the sequences

Brushless Technology low-maintenance

Complete system designed and manufactured in Germany

Made in Germany

Torque rotation angle mode

Repeatability +/- 3 %

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

Powerful 144 Wh (36 V/4 Ah) lithium-ion battery

USB interface for data transmission

The 1-speed gearbox provides the highest torque already reached in the first and only gear

Documentation of over 10 000 bolted connections and pre-defining of different bolting operations with the modules TRACK and QS

Individual GEDORE factory calibration certificate

See for yourself - take a look at our new LDA Solution-Video!

New LDA Solution with data collection function

The new high-level cordless torque wrench LDA Solution, an in-house development from our company, is equipped with a documentation module for quality assurance and a sunlight-readable, intuitively operable colour display. Pre-defining of bolting-options is also possible. With its powerful 144 Wh lithium-ion battery, microprocessor electronics and Brushless Technology, the LDA Solution achieves an unprecedented torque up to 13 000 Nm - all in a single gear.
With the torque rotation angle controlled tightening process a perfectly defined screw connection is guaranteed to the highest quality standards.

Conform to the highest standards

The data transmission of all bolted connections processes via USB interface at the end of the working day is done flawlessly and seamlessly with the LDA Solution. The LDA Solution is therefore absolutely Industry 4.0-compatible and meets the requirements of VDI / VDE 2862.
If you would like to know more about the function of live torque measurement, please contact us – we will be glad to advise you.

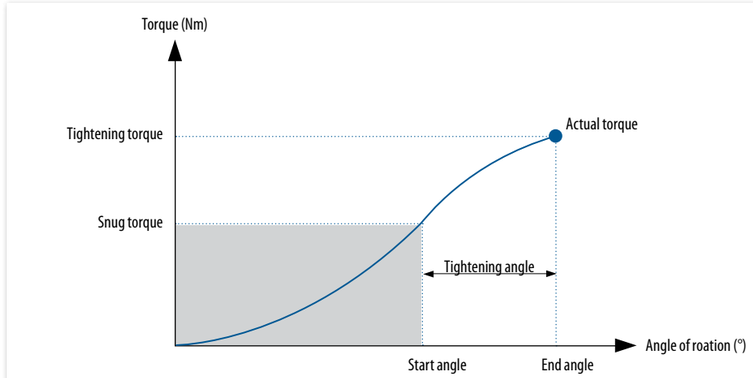
Includes bolting software TRACK and QS

The integrated documentation module TRACK or QS makes the documentation of more than 10 000 bolted connections possible and serves for the quality-assured archiving of your completed work.

» More information about documentation modules
see pages 54/55

Defined bolting with the torque rotation angle controlled tightening process

For a more precise tightening of the bolts, the LDA Solution offers the torque rotation angle mode. After reaching torque, the bolt is retensioned by the previously defined further angle of rotation, thus guaranteeing a perfectly defined bolted connection according to the highest quality standards, which complies with established standards.



Proven system workflow with digital colour display

For maximum precision, the LDA Solution offers a visual and acoustic zero-defect strategy: a sunlight-capable, digital colour display visualizes the entire workflow; in addition, an acoustic signal sounds as soon as the set value is reached.

Lies comfortably in the hand

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

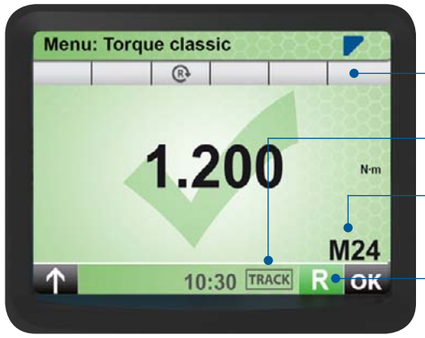
The display and its functions

Standard

Process OK

Process not OK

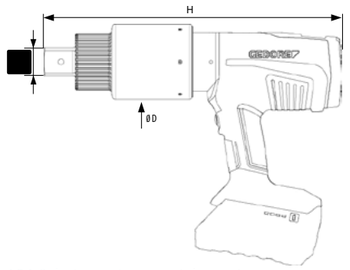
Messages and informations



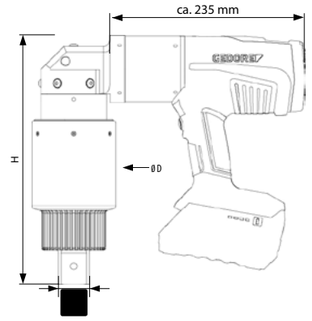
- Toolbar shows the status of the device (USB connection, thread direction, temperature)
- Activated module (TRACK or QS)
- Typical bolt for adjusted torque
- Direction of rotation
- 2" high-resolution LCD colour display with impact-resistant macrolon screen

- Setting wheel for easy selection of bolt-cases and torque values
- OK-button
- USB interface for data transmission
- Back-button

Technical data



LDA Solution series – straight version



LAW Solution series – angled version

Type	N·m min/ max	lbf·ft min/ max	~ U/min	■	Ø D mm	H mm	kg*
LDA-12 Solution	150 - 1200	110 - 890	16	¾“	80	334	5.2
LDA-15 Solution	200 - 1500	150 - 1110	10	1“	88	349	6.3
LDA-22 Solution	300 - 2200	220- 1630	7	1“	90	366	6.8
LDA-32 Solution	400 - 3200	295 - 2360	5	1“	88	390	7.5
LDA-40 Solution	500 - 4000	370 - 2950	3,8	1“	88	390	7.5
LDA-60 Solution	750 - 6000	560 - 4430	2,2	1½“	102	405	9.1
LDA-80 Solution	1000 - 8000	740 - 5900	1,8	1½“	128	423	12.1
LDA-100 Solution	1250 - 10000	930 - 7380	1,4	1½“	142	438	14.0
LDA-130 Solution	1600 - 13000	1180 - 9590	1,0	1½“	174,5	454	20.1
LAW-22 Solution	300 - 2200	220 - 1630	7	1“	90	256	8.7
LAW-32 Solution	400 - 3200	290 - 2360	5	1“	88	289	9.4
LAW-40 Solution	500 - 4000	370 - 2950	3,8	1“	88	289	9.4
LAW-60 Solution	750 - 6000	550 - 4430	2,2	1½“	102	295	11.0

*Without reaction arm with battery Vibration is less than 2.5 m/s² Battery: 1260g
The continuous sound pressure as per DIN 455635 is < 80 dB(A)
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
- 2x Lithium-ion battery (144 Wh/36 V/4 Ah)
- Charger 220–240 V; 50/60 Hz or 110-120 V; 50/60 Hz for USA
- Module LA.TRACK and LA.QS
- Tool box
- Operating 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 bespoken reaction arm design

*USA: Illustration similar

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

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.

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.

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.

» More information about documentation modules
see pages 54/55

The display and its functions:

HAND GRIP

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

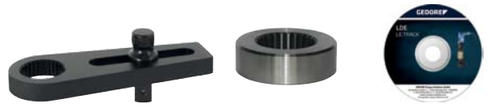
The hand grip is included from size LEW-60 for the angled electric torque wrenches.

Scope of delivery

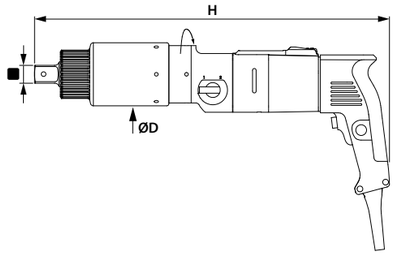
- Device
- Hand grip (from LDE-70/LEW-60)
- Reaction arm cranked with lock on function made of chrome vanadium steel
- Tool box
- Operating manual
- Factory calibration certificate

Optional accessories

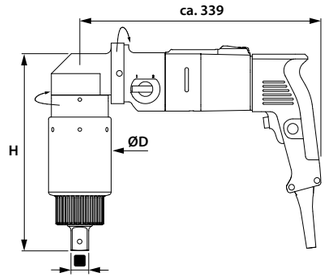
- Reaction arm made of light alloy, straight with adjustable locking knob with movable square-end and retaining ring
- Reaction ring for bespoken reaction arm design
- Module LE.TRACK



Technical data



LDE series – straight version



LEW series – angled version

LDE series - straight version

Type	N·m min*1/ max*2	lbf·ft min*1/ max*2	~ U/min	■	Ø D mm	H mm	kg *3
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 ½“	102	515	9.2
LDE-70	850 - 7500	630 - 5500	3	1 ½“	128	531	12.1
LDE-90	1100 - 9000	810 - 6600	2.5	1 ½“	142	542	14.0
LDE-120	1600 - 13 000	1180 - 9500	2	1 ½“	174.5	560	20.0

*1 Lowest torque in 2nd gear *2 Maximum torque in 1st gear *3 Without reaction arm Vibration is less than 2.5 m/s²
The continuous sound pressure as per DIN 455635 is 78 dB (A)

LEW series - angled version

Type	N·m min*1/ max*2	lbf·ft min*1/ max*2	~ U/min	■	Ø D mm	H mm	kg *3
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 ½"	102	296	10.7
LEW-70	850 - 7500	630 - 5500	3	1 ½"	128	311	12.9
LEW-95	1100 - 9500	810 - 7000	2.5	1 ½"	142	323	14.6
LEW-120	1600 - 13 000	1180 - 9500	2	1 ½"	174.5	340	20.6

*1 Lowest torque in 2nd gear *2 Maximum torque in 1st gear *3 Without reaction arm Vibration is less than 2.5 m/s²
The continuous sound pressure as per DIN 455635 is 78 dB (A)

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

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 *2 Maximum torque in 1st gear *3 Without reaction arm Vibration is less than 2.5 m/s²
The continuous sound pressure as per DIN 455635 is 78 dB (A).
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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)

THE CRANE
TORQUE WRENCH

There are applications where torque wrenches have to provide even more power. This includes crane assembly at great heights. The devices in L-version are specially designed for the HV bolted connections on the tower sections of the Liebherr HC and EC models.

We also offer the complete package here for the demanding user. Starting from the gear unit diameter precisely matched to the tower section and conical impact sockets right up to the appropriate reaction arm made of high-performance aluminium.
In addition, higher loosening torques for disassembly, as well as special equipment and torque settings for other crane manufactures are available.

Technical data

Electric Torque Wrench

Type	N·m min*1/ max*2	lbf·ft min*1/ max*2	~ U/min	■	Ø D mm	H mm	kg *3
LEW-60L	1200 - 6500	880 - 4800	3.5	1½"	102	296	10.7
LEW-75L	1840 - 7500	1360 - 5535	1.6	1½“	102	317	12.0
LEW-95L	1100 - 9500	810 - 7000	2.2	1½"	138	324	17.7

*1 Lowest torque in 2nd gear *2 Maximum torque in 1st gear *3 Without reaction arm
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Also available as a Heavy Duty version. LEW-60L with increased torque.

Scope of delivery

- Device
- Hand grip
- Reaction arm, HC-Design
- Tool box
- Operating manual
- Factory calibration certificate

Optional accessories

- Reaction arm EC-Design
- SL type impact socket
- Module LE.TRACK

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

Ergonomic pistol grip made of resistant pressure-cast aluminium

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

Torque values readable on the label

Rocker switch for simple change of rotation direction

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

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

Supplied with individual GEDORE factory calibration certificate

Optional: Maintenance unit

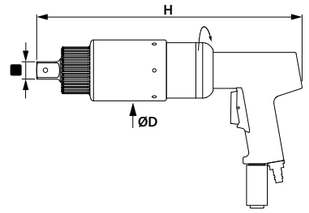
Quiet and accurate torque - even from just 2 bar operating pressure

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 2 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*1/ max*2	lbf·ft min*1/ max*2	~ U/min	■	Ø D mm	H mm	kg *3
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	1½"	102	400	7.7
LPK-70	1500 - 7000	1110 - 5160	3	1½"	128	416	10.6
LPK-95	2000 - 9500	1470 - 7000	2.5	1½"	142	431	12.5
LPK-120	2500 - 12 800	1840 - 9440	1.5	1½"	174.5	448	18.5

*1 Lowest torque at 1.5 bar *2 Maximum torque at 8 bar *3 Without reaction arm Vibration is less than 2.5 m/s² At 8 bar ca. 1400 l/min.
The continuous sound pressure as per DIN 455635 is 84 dB(A)

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

THE PNEUMATIC TORQUE WRENCH
LPK-X SERIES, 80 - 4200 Nm

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

Torque values readable on the label

Rocker switch for simple change of rotation direction

Low-backlash high-performance gear unit for reliable, long-term operation

Reduced size and compact construction for extremely confined spaces

2-speed planet gear unit for up to 7-fold faster tightening speed

Supplied with individual GEDORE factory calibration certificate

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.

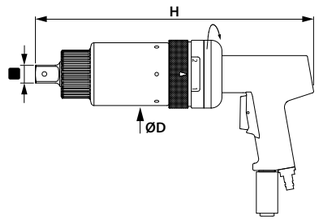
Scope of delivery

- Device
- Reaction arm cranked with lock on function made of chrome vanadium steel
- Tool box
- Operating 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 bespoken reaction arm design
- Hose (4m)
- Maintenance unit

Technical data



LPK-X series – pneumatic

Typ	N·m min*1/ max*2	lbf·ft min*1/ max*2	~ U/min*3	■	Ø D mm	H mm	kg *4
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

*1 Lowest torque in 1st gear at 1.5 bar *2 Maximum torque in 1st gear at 8 bar *3 Maximum speed in 2nd gear *4 Without reaction arm
At 8 bar ca. 1400 l/min. All rights reserved. Vibration is less than 2.5 m/s² The continuous sound pressure as per DIN 455635 is 84 dB(A)
Further torque ranges on request. All rights reserved. Subject to modifications without prior notice.

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

Integrated relief valve in the hydraulic connection increases work safety

360° rotating hydraulic connection under load for flexible bolting work

Reduced size and compact construction for extremely confined spaces

Quick-change mechanism for rapid shifting of the reaction arm

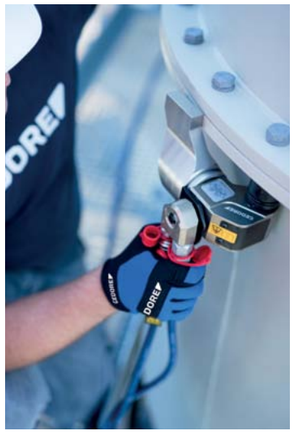
Super-light high performance aluminium for rugged and ergonomic handling

Various inserts as accessories for flexible working

Counter bearing with push button allows quick replacement of various inserts

Optional: Swivel connection

Optional: Inclined connection



Light, easy to handle and with high torque

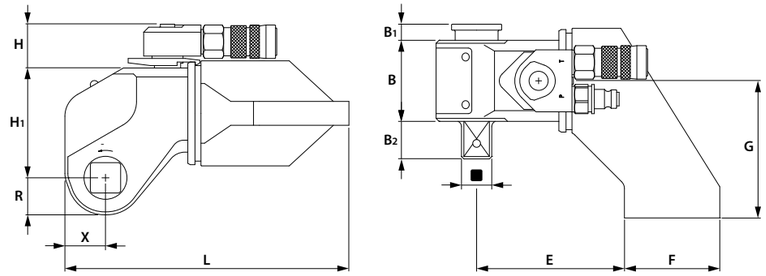
The LDH is used where space is limited but high torque is required. In order to facilitate bolting operations for the user, the hydraulic torque wrench series has been designed with high-performance aluminium and subject to continuous improvements.
The size has therefore been constantly reduced while 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*1	lbf·ft min/ max*1	■	B mm	B_1 mm	B_2 mm	E mm*3	F mm*3	G mm	H mm	H_1 mm	L mm*3	R mm	X mm	kg *2
LDH-12V	60 - 1200	45 - 880	¾"	46	7	28	-/88	-/48	78	37	62	-/158	19	22	1.9
LDH- 24V	120 - 2350	90 - 1730	¾"	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 ½"	76	12	44	74/134	94/93	122	37	107	207/266	36	39	6.2
LDH-100V	500 - 10 000	370 - 7300	1 ½"	84	13	39	85/150	105/99	130	37	115	233/292	39	43	7.8
LDH-170V	800 - 16 000	590 - 11800	1 ½"	100	11	45	93/163	118/108	150	50	135	265/325	48	54	11.8
LDH-270V	1300-27 000	960 - 19900	2 ½"	119	18	76	121/206	145/133	200	50	164	329/402	59	63	24.0

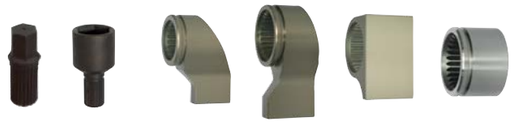
*1 Maximum torque at 800 bar *2 Without reaction arm
*3 Reaction arm type L(LM) / Reaction arm type S(LM) Vibration is less than 2.5 m/s^2
The continuous sound pressure as per DIN 455635 is < 70 dB(A)

Scope of delivery

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

Optional accessories

- Allen screw
- Toothed impact sockets and special inserts on request
- Different reaction arms (look p. 36)
- Swivel connection (see above)
- Inclined connection (see above)



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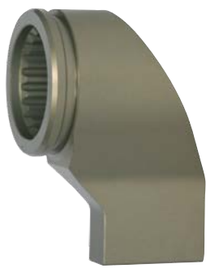
Allen screw - ISW

Type	ISW mm
LDH-12V	ISW 12V-14
	ISW 12V-17
	ISW 12V-19
LDH-24V	ISW 24V-14
	ISW 24V-17
	ISW 24V-19
	ISW 24V-22
	ISW 24V-24
LDH-48V	ISW 48V-17
	ISW 48V-19
	ISW 48V-22
	ISW 48V-24
	ISW 48V-27
	ISW 48V-30
	ISW 48V-32

Type	ISW mm
LDH-75V	ISW 75V-17
	ISW 75V-19
	ISW 75V-22
	ISW 75V-24
	ISW 75V-27
	ISW 75V-30
	ISW 75V-32
LDH-100V	ISW 100V-19
	ISW 100V-22
	ISW 100V-24
	ISW 100V-27
	ISW 100V-30
	ISW 100V-32
	ISW 100V-36

Type	ISW mm
LDH-170V	ISW 170V-27
	ISW 170V-30
	ISW 170V-32
	ISW 170V-36
	ISW 170V-41
	ISW 170V-46
LDH-270V	ISW 270V-36
	ISW 270V-41
	ISW 270V-46
	ISW 270V-50
	ISW 270V-55
	ISW 270V-60
	ISW 270V-65
	ISW 270V-70

Reaction arms



Reaction arm S (LM)
Standard design

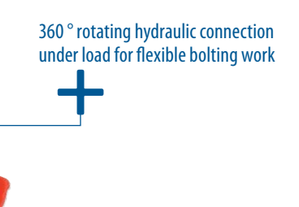
Reaction arm L (LM) (except LDH-12V)
Compact design

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

Reaction sleeve RH (St)

THE CASSETTE WRENCH
LDK SERIES, 160 - 24000 Nm

Optional: Swivel connection



Optional: Inclined connection

Scope of delivery

- Device
- Tool box
- Torque-setting-table
- Operating manual

Optional accessories

- Retaining ring – HR and hexagon insert – SA
- Exchangeable cassette - WK
  Inch sizes on request
- In-Out impact socket
- Swivel connection (see above)
- 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.

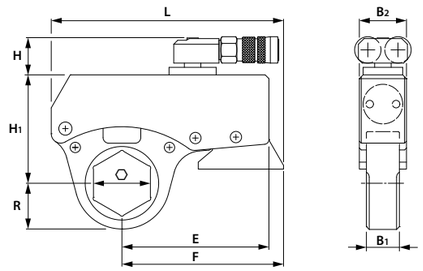
Economic in use

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.

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.

Technical data



LDK series – hydraulic

Type	N·m min/ max*1	lbf·ft min/ max*1	⬡ mm	⬡ "	B_1 mm	B_2 mm	E mm	F mm	H mm	H_1 mm	L mm	R mm	*2 kg
LDK - 3	160 - 3300	120 - 2400	32 - 60	1¼" - 2⅜"	28	40	137	145	39.2	91/103	137	28 - 48	1.6
LDK - 6	350 - 6200	260 - 4500	41 - 80	1⅝" - 3⅛"	35	50	156	172	39.2	115/130	156	34 - 60	2.4
LDK - 12	550 - 12 500	410 - 9200	55 - 100	2 3/16" - 3⅜"	47	65	200	215	39.2	141/156	200	46 - 73	4.4
LDK - 24	1200 - 24 000	880 - 17 700	80 - 130	3⅛ - 5"	56	82	245	260	50.0	182/202	245	62 - 96	8.2

*1 Maximum torque at 800 bar *2 Without exchangeable cassette

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Technical data: Interchangeable cassettes - WK, Hexagon insert - SA, Retaining ring - HR

Type	WK Typ	R mm	H_1 mm	N·m max*1	lbf·ft max*1	SA*2 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	SA3-41»30	HR-41
	WK3-46	38.5	91	2890	2130	SA3-46»41	SA3-46»36	SA3-46»32	HR-46
	WK3-50	42.0	103	3290	2430	SA3-50»46	SA3-50»41	SA3-50»36	HR-50
	WK3-55	45.0	103	3290	2430	SA3-55»50	SA3-55»46	SA3-55»41	HR-55
	WK3-60	47.5	103	3290	2430	SA3-60»55	SA3-60»50	SA3-60»46	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	SA6-46»32	HR-46
	WK6-50	43.5	115	5410	3990	SA6-50»46	SA6-50»41	SA6-50»36	HR-50
	WK6-55	46.5	115	5410	3990	SA6-55»50	SA6-55»46	SA6-55»41	HR-55
	WK6-60	48.5	115	5410	3990	SA6-60»55	SA6-60»50	SA6-60»46	HR-60
	WK6-65	52.5	130	6190	4570	SA6-65»60	SA6-65»55	SA6-65»50	HR-65
	WK6-70	55.5	130	6190	4570	SA6-70»65	SA6-70»60	SA6-70»55	HR-70
	WK6-75	57.5	130	6190	4570	SA6-75»70	SA6-75»65	SA6-75»60	HR-75
	WK6-80	60.5	130	6190	4570	SA6-80»75	SA6-80»70	SA6-80»65	HR-80
LDK-12	WK12-55	46.5	141	8000	5900	SA12-55»50	SA12-55»46	SA12-55»41	HR-55
	WK12-60	48.5	141	8000	5900	SA12-60»55	SA12-60»50	SA12-60»46	HR-60
	WK12-65	52.5	141	9800	7230	SA12-65»60	SA12-65»55	SA12-65»50	HR-65
	WK12-70	55.5	141	9800	7230	SA12-70»65	SA12-70»60	SA12-70»55	HR-70
	WK12-75	57.5	141	9800	7230	SA12-75»70	SA12-75»65	SA12-75»60	HR-75
	WK12-80	60.5	141	10 860	8010	SA12-80»75	SA12-80»70	SA12-80»65	HR-80
	WK12-85	64.5	156	12 500	9220	SA12-85»80	SA12-85»75	SA12-85»70	HR-85
	WK12-90	67.5	156	12 500	9220	SA12-90»85	SA12-90»80	SA12-90»75	HR-90
	WK12-95	70.5	156	12 500	9220	SA12-95»90	SA12-95»85	SA12-95»80	HR-95
	WK12-100	73.5	156	12 500	9220	SA12-100»95	SA12-100»90	SA12-100»85	HR-100
LDK-24	WK24-80	62.0	182	13 950	10 290	SA24-80»75	SA24-80»70	SA24-80»65	HR-80
	WK24-85	66.0	182	15 810	11 660	SA24-85»80	SA24-85»75	SA24-85»70	HR-85
	WK24-90	69.0	182	16 430	12 120	SA24-90»85	SA24-90»80	SA24-90»75	HR-90
	WK24-95	72.0	182	17 860	13 170	SA24-95»90	SA24-95»85	SA24-95»80	HR-95
	WK24-100	76.0	182	17 860	13 170	SA24-100»95	SA24-100»90	SA24-100»85	HR-100
	WK24-105	80.0	182	17 860	13 170	SA24-105»100	SA24-105»95	SA24-105»90	HR-105
	WK24-110	84.0	202	24 000	17 700	SA24-110»105	SA24-110»100	SA24-110»95	HR-110
	WK24-115	87.0	202	24 000	17 700	SA24-115»110	SA24-115»105	SA24-115»100	HR-115
	WK24-120	90.0	202	24 000	17 700	SA24-120»115	SA24-120»110	SA24-120»105	HR-120
	WK24-125	93.0	202	24 000	17 700	SA24-125»120	SA24-125»115	SA24-125»110	HR-125
	WK24-130	96.0	202	24 000	17 700	SA24-130»125	SA24-130»120	SA24-130»115	HR-130

*1 Maximum torque at 800 bar *2 Special adapter on request Vibration is less than 2.5 m/s² The continuous sound pressure as per DIN 455635 is < 70 dB(A)

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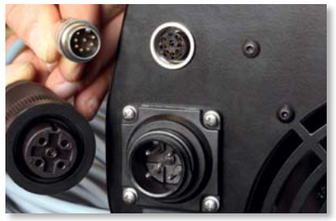
THE HYDRAULIC UNIT
LHU SERIES

Sensors are installed in the unit, not in the hydraulic torque wrench. This makes the unit compatible with all hydraulic torque wrenches (dual-hose system)

Completely sealed housing protects unit and operator even in the roughest of applications

Wear-free pump technology means that the unit is maintenance-free

Plug-in connections for power and control system



Maximum pressure: 800 bar

Novel cooling air supply for optimal cooling of the unit even under extreme loads

OR

OR

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.

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

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

Technical data

Type	V / Hz	MP L/min., bar	HP L/min., bar	Tank L*1	LxBxH mm	kg *2 – M	kg *2 – A	kg *2 – Solution
LHU-30	110/50	2.1/320	0.7/800	3.0	400x240x380	27.0	27.2	27.5
LHU-30	110/60	2.5/320	0.8/800	3.0	400x240x380	27.0	27.2	27.5
LHU-30	230/50	1.7/320	0.8/800	2.5	400x240x380	27.0	27.2	27.5
LHU-30	230/60	2.5/320	0.8/800	3.0	400x240x380	27.0	27.2	27.5
LHU-35	110/50	3.0/320	0.8/800	3.5	570x275x400	41.5	42.0	42.5
LHU-35	110/60	3.5/320	1.0/800	3.5	570x275x400	41.5	42.0	42.5
LHU-40	230/50	3.1/320	0.7/800	4.0	480x270x400	33.0	33.5	34.0
LHU-40	230/60	3.7/320	0.9/800	4.0	480x270x400	33.0	33.5	34.0
LHU-60	400/50, 60	4.7, 5.6/320	1.4, 1.7/800	6.2	480x270x400	36.5	37.2	37.5

*1 Supplied filled with oil and ready for operation *2 Weight with control system, without oil

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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

Integrated return safety „RS“ for CW/CCW rotation and safe operation (as of model LKV-40RS)

Integrated overload safety mechanism for gear unit protection

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

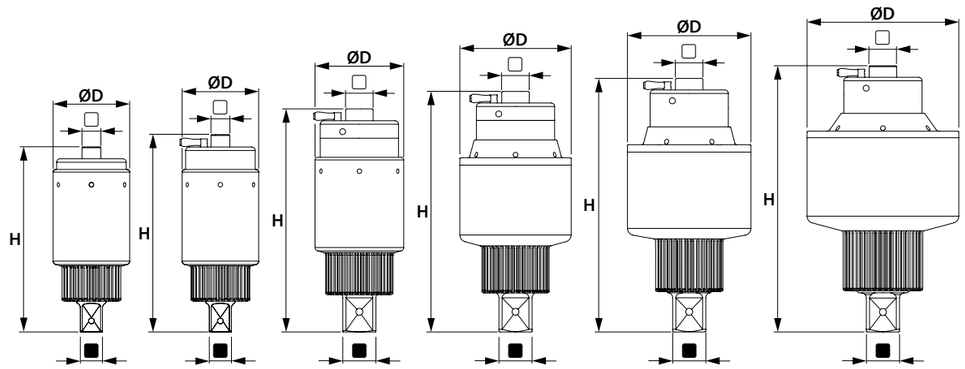
Planet gear unit with ceramic-Teflon®-coated tooth flanks (as of model LKV-40) enables minimum lubrication

Supplied with individual GEDORE factory calibration certificate

Drop-forged reaction arm with lock on function, made of chrome-vanadium steel for even greater stability

LKV-40 LKV-40RS LKV-60RS LKV-80RS LKV-100RS LKV-120RS

Technical data LKV-40 - LKV-120RS



LKV - 40 LKV - 40RS LKV - 60RS LKV - 80RS LKV - 100RS LKV - 120RS

Type	N·m max	lbf·ft max	N·m min / max*1	lbf·ft min / max*1	*2	▢	■	Ø D mm	H mm	*3
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

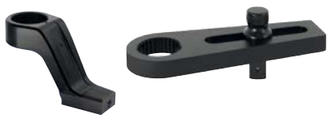
*1 Maximum load limit! Take into account a reserve of ~25% when selecting a device and, where applicable, note increased loosening torques!
*2 Approximate data *3 Without reaction arm (except for LwKV-550RS device with reaction plate)
Further torque ranges on request. All rights reserved. Subject to 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)
- Tool box
- Operating manual
- Factory calibration certificate
- Torque calculator

Optional accessories

- Reaction arm cranked with lock on function, made of light alloy with protective cap made of steel (from LKV-100)
- Reaction arm made of light alloy, straight with adjustable locking knob with moveable square-end and retaining ring (up to LKV-100)



Mechanical, hand operated torque multiplier for controlled tightening and untightening of bolt-connections

Housing and gear unit

The housing and gear unit are the innovations in this series. A new production method was created, based on nature. The housing is therefore approx. 30 % lighter but still sturdy.
At the same time, the ceramic-Teflon® coating enables minimum device lubrication. While convential lubricated torque multipliers decrease in performance (efficiency) when the outside temperatures are colder, due to the increasing tenacity of the grease, this unit operates independently of the temperature.

Non-destructive overload protection

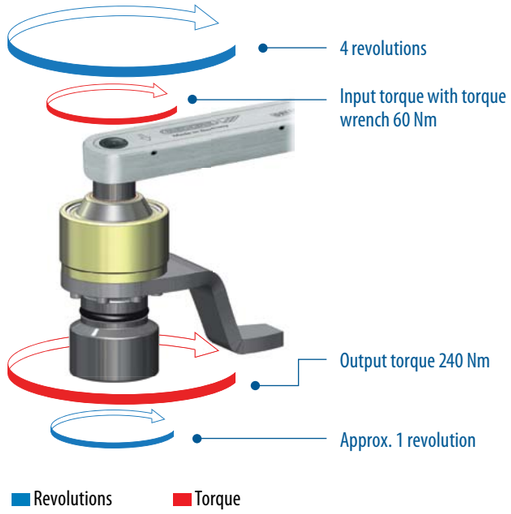
The 40-120RS models are equipped with a non-destructive overload safety mechanism. This patent-filed innovation represents real cost savings for the user. The basis of this extra feature is a highly-dynamic, pre-tensioned slip-coupling. As soon as the maximum permissible input torque is exceeded, the „Slipper" triggers with a clearly audible acoustic noise.
The torque multiplier is not damaged so that normal operation can be started again. This means that no assembly downtimes occur and the safety of the operator is actively supported.

Certified safety

A completely new benefit for the torque multiplier is the individual factory calibration certificate for each device. This has never been the case before. This allows bolting operations to be implemented at a high level of torque precision. The torque tables on the devices display the standard torque for HV bolts. The tables can also be modified on request to the individual torques of the operator.

THE FUNCTION PRINCIPLE

Torque - Speed



The image demostrates the principle of torque multiplication.
Let us assume a 60 Nm input torque and a 240 Nm output torque.
At a 1:4 ratio, 4 revolutions are needed at the input for 1 revolution with a 240 Nm torque to be obtained at the output.

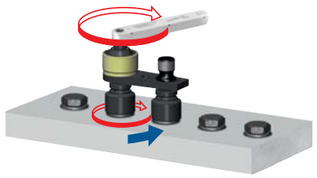
This is based on the physical formula:

Power = torque x revolution

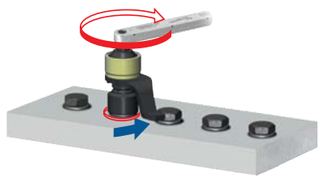
With gear efficiency deducted, the output power can be considered as a constant equal to the input power. Thus multiplication of the torque can only be obtained from an increased number of revolutions at the input.

Force and reaction

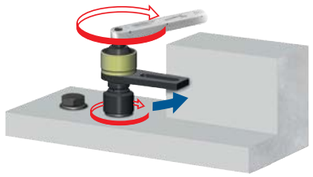
When working with a torque multiplier, torsion wind-up is built up in the gear while the bolt is tightened.
This stress must be reduced. A reaction absorbed by reaction arm and thrust bearing is produced.



Reaction arm made of light alloy, straight with adjustable locking knob with slave square: The reaction acts on the adjacent impact socket



Reaction arm cranked:
The reaction acts on the adjacent bolt connection



Reaction arm straight without adjustable reaction square drive:
The reaction acts on the wall. However, the resulting tilting moment means that the maximum permitted torque is reduced by 20%.

Torque

Reaction

THE TORQUE MULTIPLIER
SERIES LKV, 50 - 1300 Nm

Total weight of 1.9 kg for best torque-weight ratio

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

Easy to handle and compact as optimal on-board tool suitable for utility vehicles or construction machines

Drop-forged reaction arm with lock on function, made of chrome-vanadium steel for even greater stability

Supplied with individual GEDORE factory calibration certificate

Scope of delivery

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

Optional accessories

- Reaction arm made of light alloy, straight with adjustable locking knob with slave square and retaining ring
- Replacement sun wheel (replacement part)

TECHNICAL DATA LKV-12

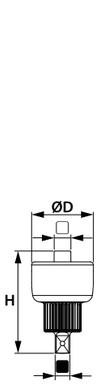
Small, easy to handle, light and sturdy

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. Due to the minimum lubrication of the gear unit, the device is not effected by temperature changes and can be operated without problems even at freezing temperatures.



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

*1 Maximum load limit! Take into account a reserve of ~25% when selecting a device and, where applicable, note increased loosening torques!
*2 Approximate data *3 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

Fixed reaction arm in straight or cranked version

Output square as overload protection for gear unit protection

Series LKV-20L/ 28L

Supplied with individual GEDORE factory calibration certificate

Scope of delivery

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

Replacement parts

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

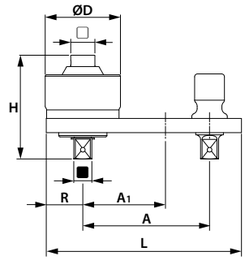
TECHNICAL DATA LKV-20/28

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

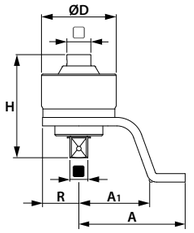
The positioning of the torque multiplier must be implemented easily and rapidly, particularly for flange bolt connections. The LKV-L is equipped with a fixed straight reaction arm and is therefore a complete solution for flange bolt connections. The required spacing between two bolts can be rapidly and 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*1	lbf·ft min / max*1	•:⚙*2	□	■	A mm	A_1 mm	ø D mm	H mm	R mm	kg *3
LKV-20L	580	430	100 - 2000	70 - 1500	1:4	¾"	1"	152	73	88	131	43	1.8
LKV-20Z	580	430	100 - 2000	70 - 1500	1:4	¾"	1"	150	100	88	131	43	1.8
LKV-28L	550	410	500 - 2800	400 - 2050	1:5.5	¾"	1"	199	83	106	146	52	2.4
LKV-28Z	550	410	500 - 2800	400 - 2050	1:5.5	¾"	1"	151	101	106	146	52	2.4

*1 Maximum load limit! Take into account a reserve of ~25% when selecting a device and, where applicable, note increased loosening torques!
*2 Approximate data *3 Without reaction arm

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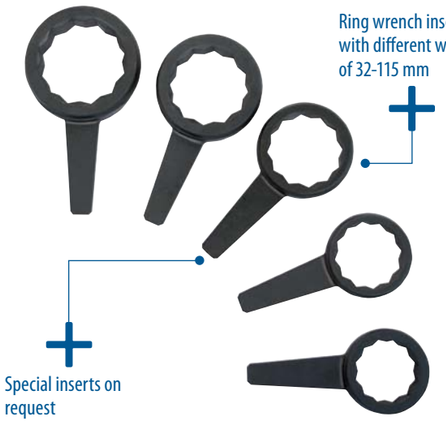
THE COUNTER WRENCH
LKS SERIES, RSW 32 - 115 mm

Optional ring wrench inserts RSW 32-115mm



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.

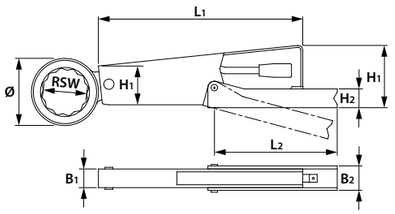
Technical data

Type	L_1 mm	B_1 mm	H_1 mm	L_2 mm	B_2 mm	H_2 mm	kg
LKS	310	27	65/95	190	38	30	2.6 / 0.4 *1

*1 Plus reaction element

Ring wrench inserts type RSW

RSW mm	Ø *2 mm	RSW mm	Ø *2 mm	RSW mm	Ø *2 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



*2 Head diameter (Ø similar DIN 7444)
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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 Date		Project Number	
Application Type ID No. bolt Tool	LHD-75	Subassembly Department Quantity 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.

Original printed with GEDORE bolting software.

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

+ Authentic check icon is displayed in the bolting software

CHECK

3 Forgery-proof – only original protocols are provided with this line. If manipulated, this line disappears.

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

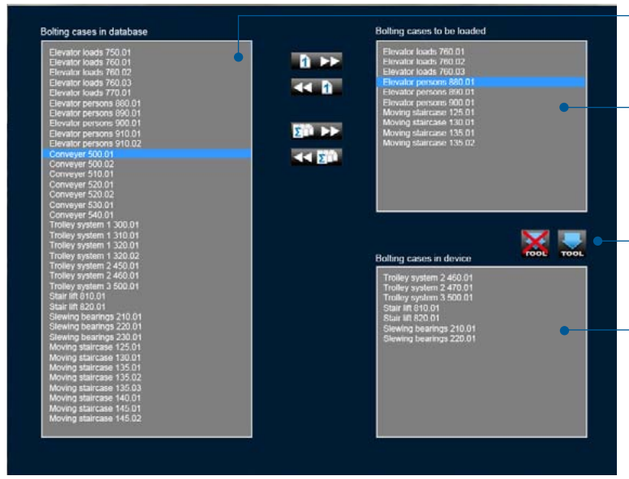
1 Detailed master data of your bolting case (including selection of tools) and four freely selectable fields

2 Selection of the desired tightening process

3 Entering the specifications of the bolting case

4 Definition of control parameters and error management

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

Display status during data exports +

Bolting software modules for the following devices available:

	LDA/LAW Solution	LDE/LEW	LHU Solution	LDB	LHD
Modul TRACK	incl.	⊕	⊕	⊕	⊕
Modul QS	incl.	–	⊕	–	⊕

⊕ Optional available
– Not possible

LDP, LTC
TORQUE TESTING BENCH TECHNOLOGY

LDP

SCOPE OF DELIVERY

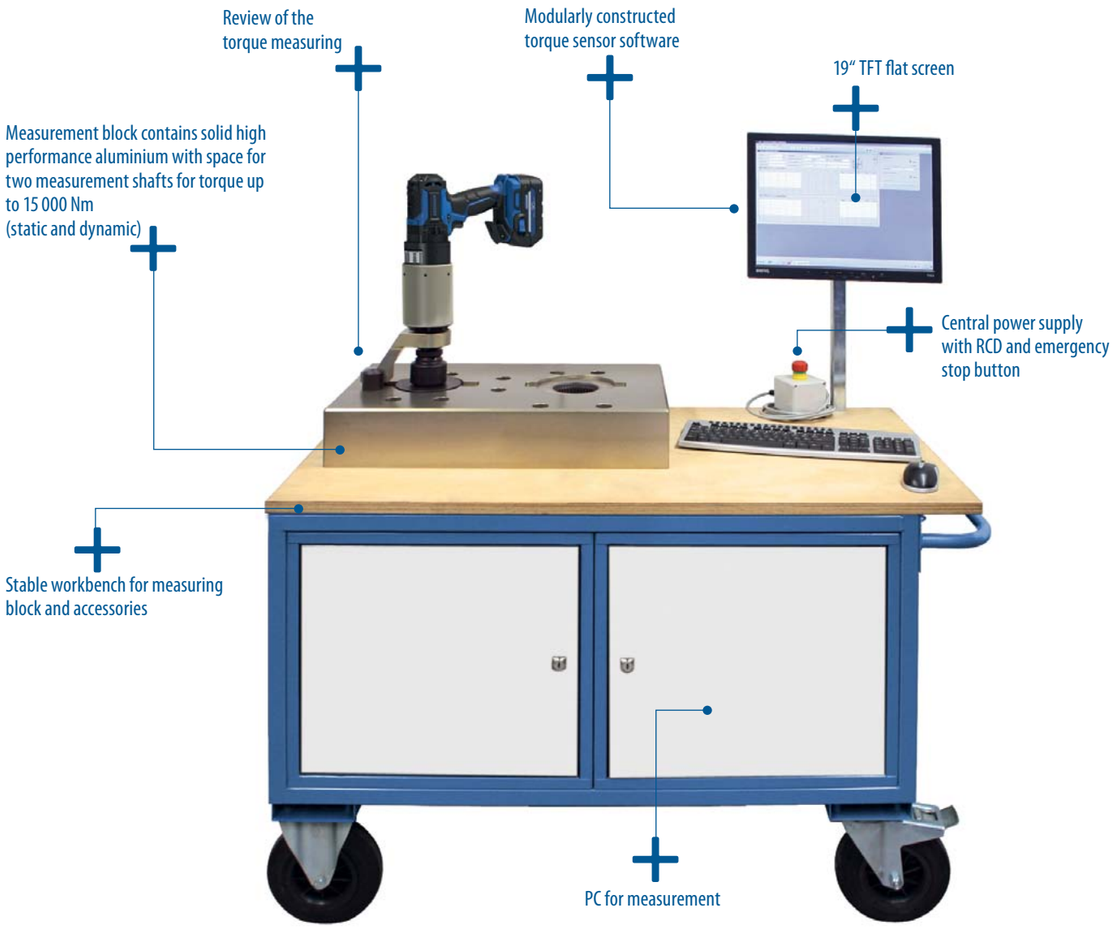
- DEVICE
- SOFTWARE
- OPERATING MANUAL
- FACTORY CALIBRATION CERTIFICATE FOR TORQUE SENSORS

LTC

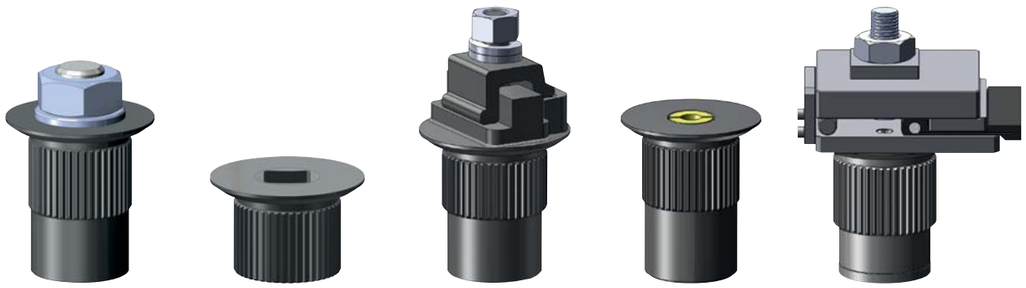
SCOPE OF DELIVERY

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

THE TORQUE TESTING BENCH TECHNOLOGY
LDP SERIES, 100 - 15000 Nm



Optional accessories - Bolt adapter



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.

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.

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.

Correction factors are not necessary

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.

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.

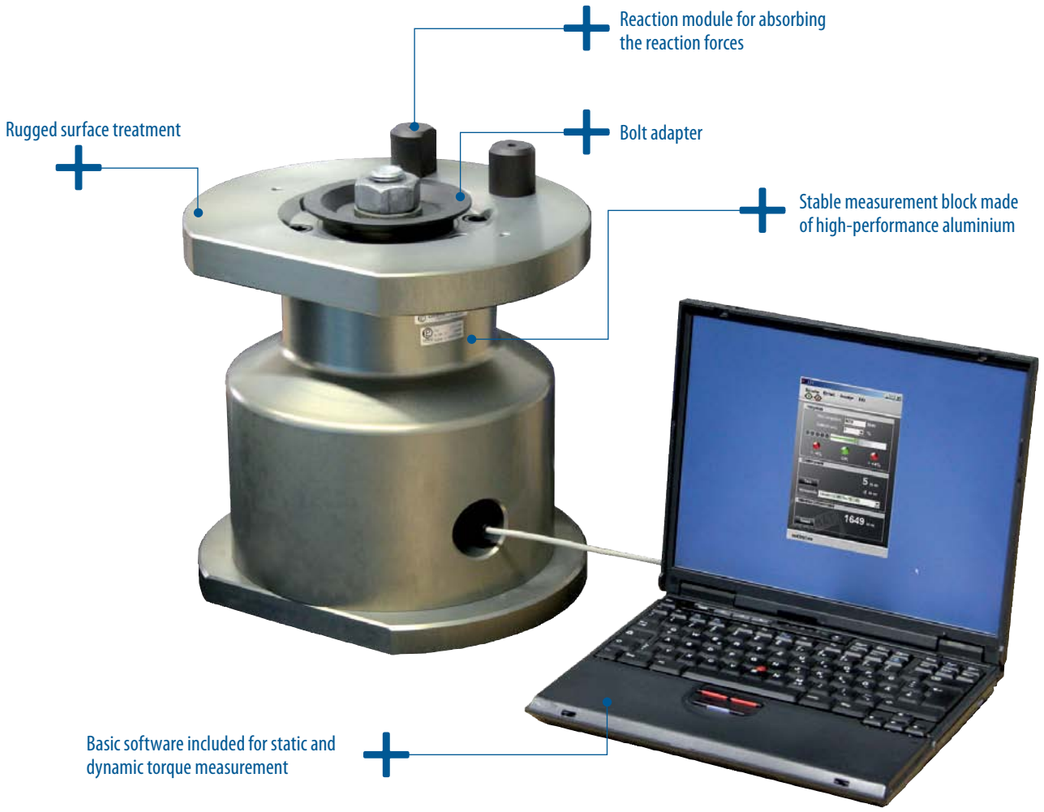
Module for different languages

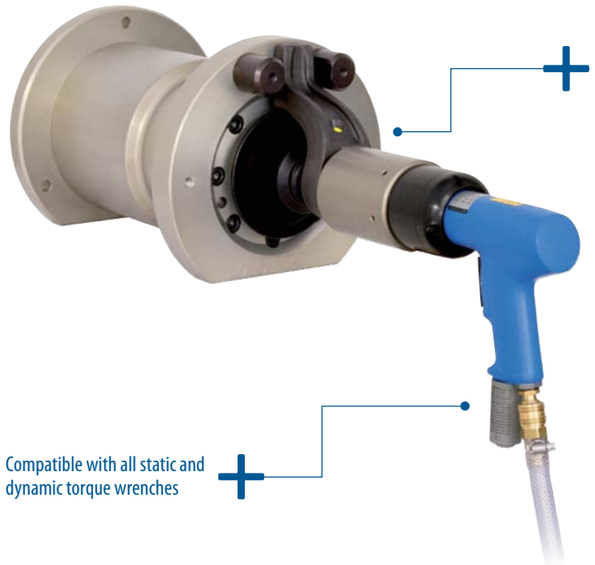
Certificates in various languages are increasingly required due to the international use of bolting systems. This is no longer a problem with the language module. The languages of all previously created factory calibration certificates can be changed during measurement and afterwards. Over 15 European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

Module for graphical evaluation

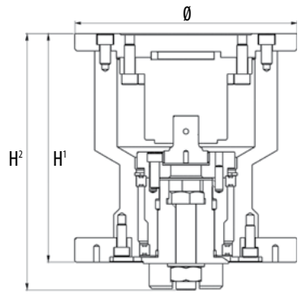
The average values of all measurement series are recorded graphically and shown on the factory calibration certificate. The torque curve is recorded up to the maximum value for hydraulic torque wrenches and manual torque multipliers.

THE TORQUE TESTING BENCH TECHNOLOGY
LTC SERIES, 100 - 5000 Nm





	LTC-10	LTC-30	LTC-50
Ø	276	276	336
H[1]	306	336	345
H[2]	346	376	387



Static and dynamic torque measurements up to 5 000 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:

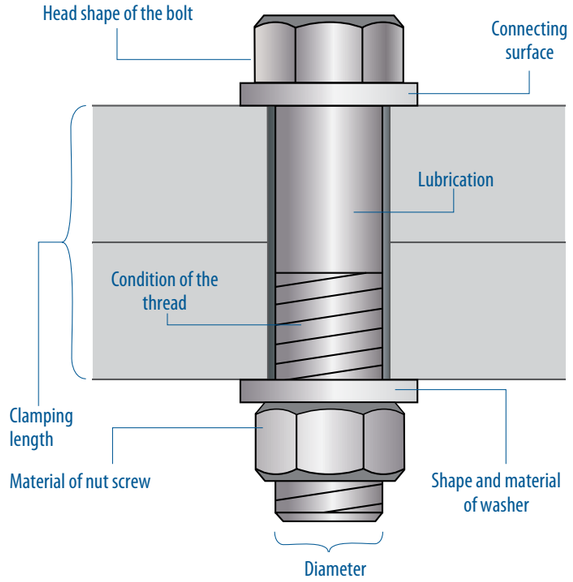
LTC-10	100–1 000 Nm
LTC-30	300–3 000 Nm
LTC-50	500–5 000 Nm

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 tightend.
But how can the required clamp force be achieved with reproducible accuracy? The answer is: calibrate the system settings unsing original bolts.

Teach-in with original bolts

We know the influencing factors for bolt connections and take them into consideration during the test procedure.
Our philosophy is very close to practice. The bolt adapters in the torque testing benches are realised 1:1 with the real application case.
All influencing factors are taken into account within this process.
Even exotic bolting operations can be individually simulated with our torque testing benches. The entire system reacts flexibly to hard and soft, static and dynamic bolting operations.
At the end of measurement, each device receives the individual factory calibration certificate.



SPECIAL SOLUTIONS
FOR CUSTOMER SPECFIC REQUIREMENTS

GATE VALVE WRENCH LDA-S

GATE VALVE WRENCH LDE-S

GATE VALVE WRENCH LEW-S

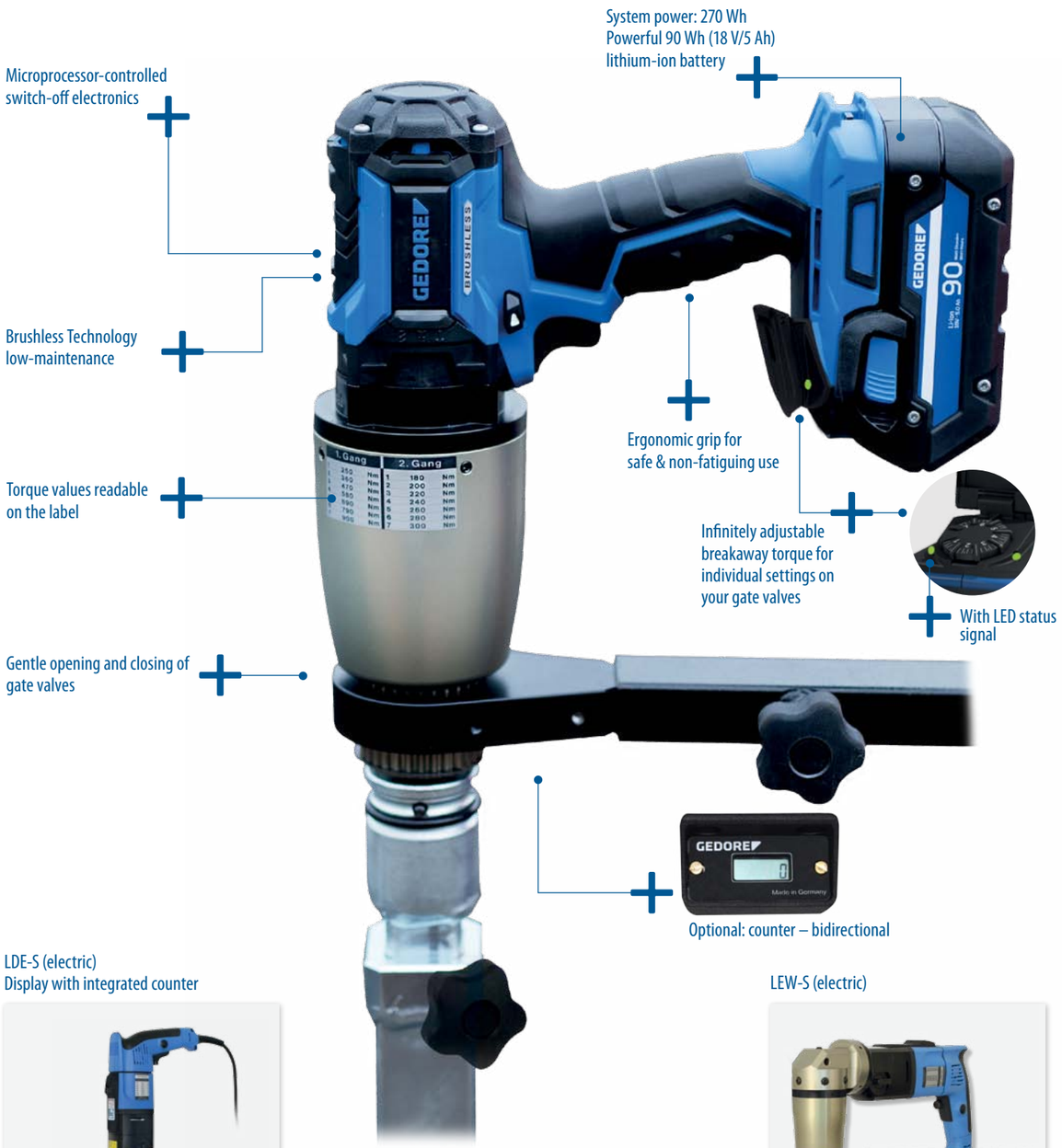
SIDE POWER WRENCH LES

SIDE POWER WRENCH LPS

RAILWAY TORQUE WRENCH LDB

HEAVY DUTY TORQUE WRENCH LHD

THE GATE VALVE WRENCHES
SERIES LDA-S, LDE-S, LEW-S



LDE-S (electric)
Display with integrated counter

LEW-S (electric)

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. 900 Nm. 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.

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.
Our gate valve wrenches work with lithium-ion technology (Li-Ion) instead of conventional nickel-cadmium batteries (Ni-Cd). By characterisic these offer 100 % more operating time per charge when compared to Ni-Cd batteries.
This provides you with peak performance during the entire usage time without loss of speed or torque.

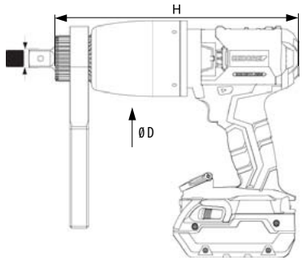
Scope of delivery

- 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 manual

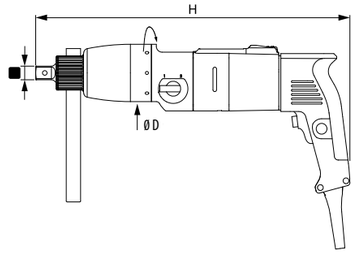
Optional accessories

- Telescopic slide rod
- Hand lever extension (approx. 800 mm long)
- Charger with 12/24V connector (specifically LDA-S)
- Counter – bidirectional
- Adapter ¾“ on conical square drive; 32 or 50 mm
- Cardan joint
- Hand wheel adapter

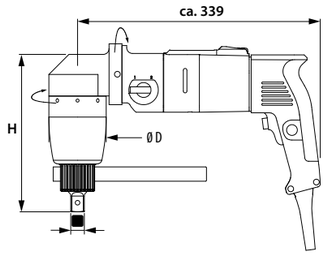
*Illustration similar



LDA-S – battery-operated



LDE-S – electric straight version



LEW-S – electric angled version

Typ	~ N·m max*1	~ lbf·ft max*1	~ U/min	■	Ø D mm	H mm	kg *2
LDA-05S	500	370	46	¾ “	80	255	3.3 *3
LDA-07S	700	520	29	¾ “	80	287	3.9 *3
LDA-09S	900	670	23	¾ “	80	287	3.9 *3
LDE-075S	770	570	25	¾ "	80	440	5.1
LDE-09S	900	670	17	¾ "	80	440	5.2
LEW-09S	900	670	18	¾ "	80	220	6.5

*1 Breakaway torque in 1st gear *2 Without reaction arm *3 With Battery: 740g Other torques on request Vibration is less than 2.5 m/s²
The continuous sound pressure as per DIN 455635 is < 70 dB(A)

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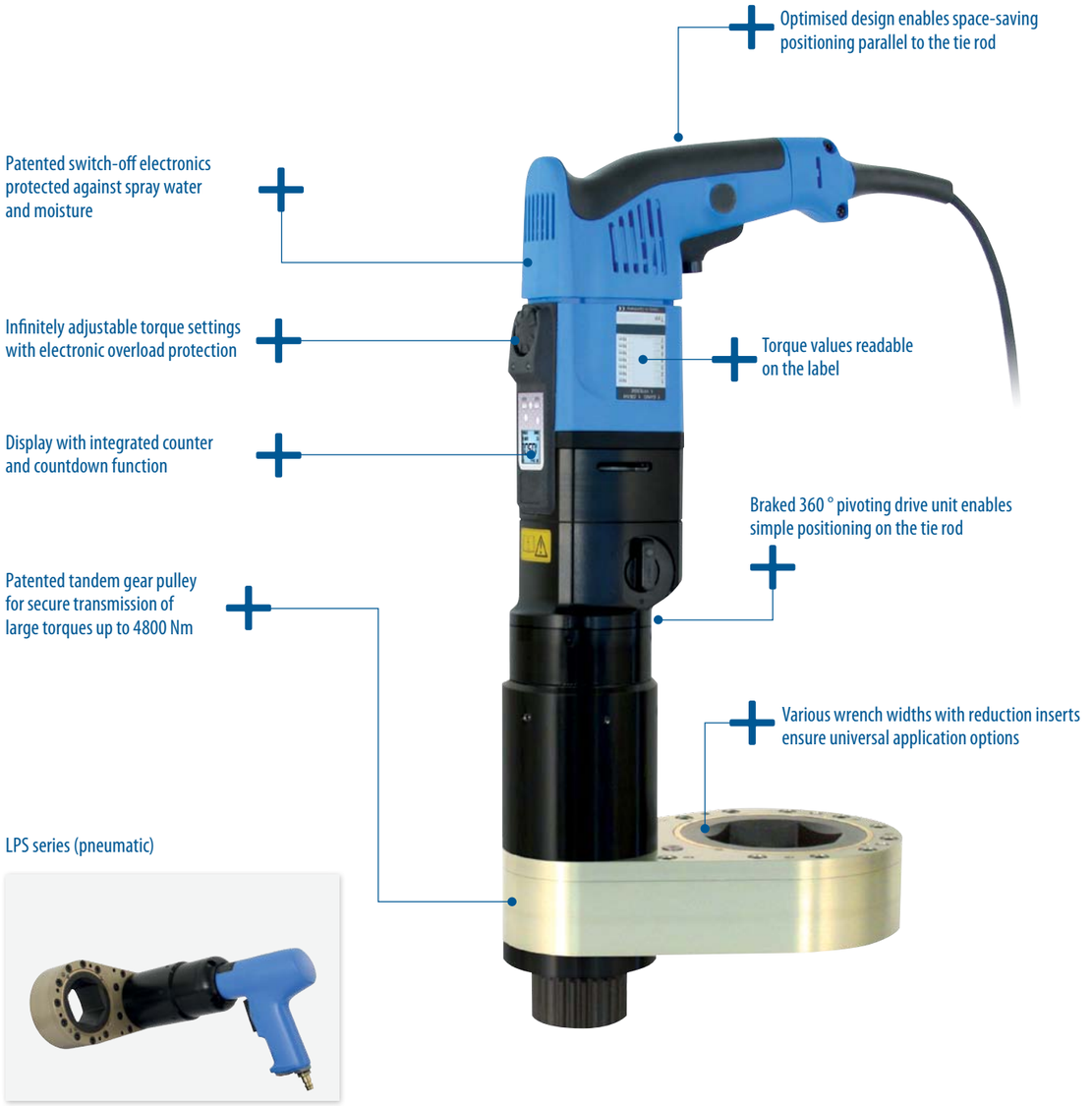
THE SIDE POWER WRENCH
LES/LPS SERIES



LPS series (pneumatic)

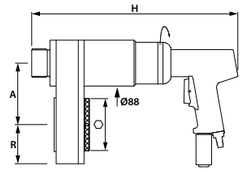
Specially developed for working on plate heat exchangers

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.

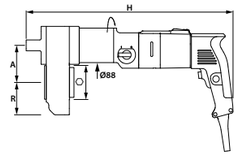
The alternative for smaller plate heat exchangers

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*1	~ lbf·ft max*1	~ U/min*2	⬡ mm	A/R mm	H mm	kg *3
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

*1 Series LES: Breakaway torque in 1st gear
*1 Series LPS: Breakaway torque at 7 bar
*2 Series LES: Maximum speed in 2nd gear
*2 Series LPS: Maximum speed at 7 bar
*3 Without reaction arm

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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						•	•	•	•	•

Scope of delivery

- Device
- 1x Hexagon adapter
- 1x Holder
- Tool box
- Operating manual

Optional accessories LES/LPS

- Hose (4 m, only LPS)
- Maintenance unit (only LPS)
- Further hexagon adapter
- Further holder

THE RAILWAY TORQUE WRENCH
LDB SERIES

Select the rail system directly on the large, illuminated 3.5" LCD colour display with impact-resistant macrolon screen

Optional: Documentation module TRACK

Low-wear, brushless DC drive with 16 kW maximum output

Maximum breakaway torque 1100 Nm

Change of direction right on the handle

Robust, lockable 48 V lithium-ion battery. For approx. 1400 bolts on new W-rail system

Additional handles, variable attachment

Supplied with individual GEDORE factory calibration certificate

Watch our LDB-video - see for yourself!

Scope of delivery

- Device
- Reaction arm (light alloy) with lock on function
- 2x Lithium-ion batteries (600 Wh/48 V/12,5 Ah)
- Charger 100–260 V; 45–70 Hz
- Operating manual
- Factory calibration certificate

Optional accessories

- Transport case for two devices
- Universal impact socket IF 3/4" and special impact sockets
- Drill adapter with various inserts
- Rapid charger for lithium-ion battery
- Module LB.TRACK
- Operation set for single railway track trolley

*Illustration similar

A complex task

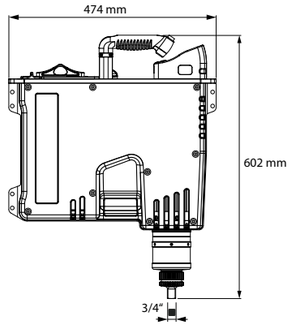
On behalf of and in close cooperation with the DB Bahnbau Group, we have found a compact and efficient answer to the complicated and sweaty track work.
The universal railway torque wrench LDB-10 is battery-operated with an operating weight of less than 20 kg, which is designed for bolting applications.
In addition to the possibility of bolting to insulation joints (150-1,000 Nm), all common superstructures are stored in the LDB (W-roadbed, KS-roadbed, K-roadbed).

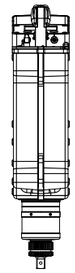
In 2017 the LDB-10 was released as one of the first tools from the 1 % and 5 % prescribed-check (valid for Deutsche Bahn) in accordance to RIL 824.5050 Z01.

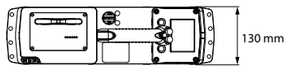
Flexible use is the feature of a universal talent

- The LDB-10 can be used for tightening and loosening horizontal bolts for insulated rail joints, fishplate joints, check rail bolts, track switch bolts etc. In comparison to the impact wrench, each bolt is opened.
- It can be held perfectly balanced in the hand of the operator thanks to the ergonomic, height-adjustable handle. Two handles that can be mounted at variable heights allows the operator to adapt the device depending on the current type of work.
- The universal railway torque wrench weighs only 17.2 kg, a fraction of conventional machines and can easily be operated and moved by one operator.
- Alongside bolting, the LDB-10 can also be used to drill sleepers using a suitable drilling adapter.
- Environmentally-friendly battery operation ensures zero-emission working. Advantage: Can be used in tunnels.
  This tool can be operated during the night as its noise levels are considerably lower than with other drives.
- The torque no longer has to be set on the LDB-10. The operator simply has to select the type of rail system from a pre-configured menu. The corresponding torques and bolting speeds have been pre-entered at the factory. The correct setting can be made quickly. And above all: Damages on the sleepers and bolts can be easily avoided.
- The LDB-10 can also be equipped with a universal impact socket. With this socket, both clip bolts (hexagon 39 mm) and sleeper bolts (square 21/28) and even fishplate bolts (hexagon 41 mm) can be torqued. W-, KS-, K-rail and track switches can be torqued without that tools has to be changed.
- The quality of each single bolt connection must be verified in line with increasing demands on safety and quality.
  The LDB-10 has been designed with this in mind and stores the type of rail track system, the time of bolting, the torque and the correct tightening.
  The memory saves up to 50 000 bolting operations and can be conveniently read out on the PC (documentation optional).
- As one of the first tools the LDB-10 was released from the 1 % and 5 % prescribed-check (valid for Deutsche Bahn). User companies thus save resources and costs to a considerable extent.

Technical data







» More information about documentation modules see pages 54/55

LDB - battery operated

Type	~ Nm max*1	~ lbf·ft max*1	~ U/min	■	L mm	B mm	H mm	kg *3
LDB-10	150-1100	110-810	160	¾"	410	130	420	17.2

*1 Breakaway torque *2 Without reaction arm, without impact socket, with battery.

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Type	C_N	U	L mm	B mm	H mm	kg
Lithium-ion battery	10 Ah	48 V DC	178	130	337	4.6

Type	Input voltage	Output voltage	P	L mm	B mm	H mm	kg	Charging time
Charger with mains cable	100-260 V / 45-70 HzWh	48 V DC / 1.6 A	100 W	218	121	55	1.35	approx.. 4.6 h

IEC C14 connector, Protective insulation Protection class I (DIN EN 61140)

THE HEAVY DUTY TORQUE WRENCH
LHD SERIES

Scope of delivery

- Device
- Reaction arm cranked with lock on function made of chrome vanadium steel
- Powerbox 180–264 V AC / 47–63 Hz
- Tool trolley
- Operating manual
- Factory calibration certificate

Optional accessories

- Module LD.TRACK, LD.QS

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.

Bolting software for data logging and quality assurance archiving

The loging 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.

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)

Standard

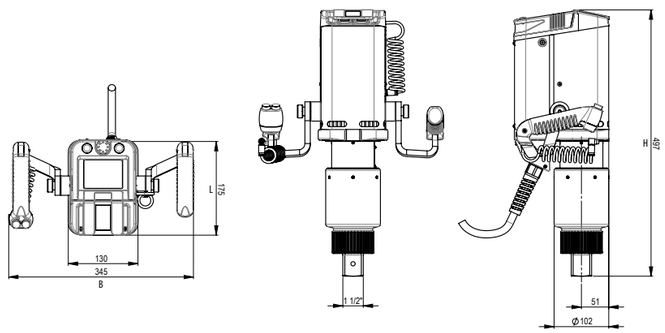
Process OK

Process not OK

Messages and informations

More information about documentation modules
see pages 54/55

Technical Data



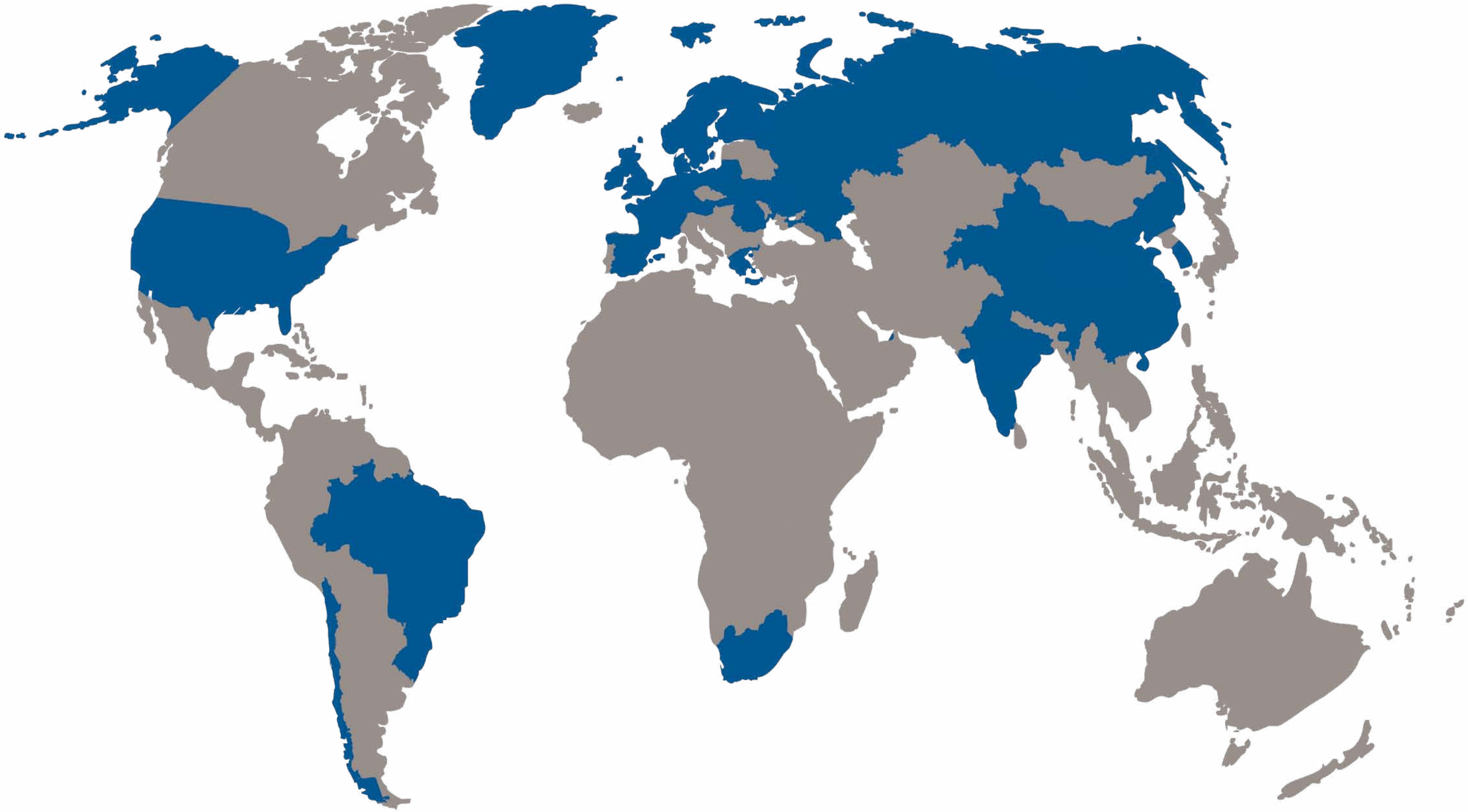
Type	~N·m min/ max	~ lbf·ft min/ max	~ U/min	■	Ø D mm	L mm	B mm	H mm	kg
LHD-75	800 - 7500	590 - 5530	10,3	1½"	102	175	345	497	14.6

Protection: IP54 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: IP33 Protection class II

COMPANY AND
SERVICES



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 100 %, 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 offe the appropriate system.
Our extensive range of products, offers you the professional solution required.

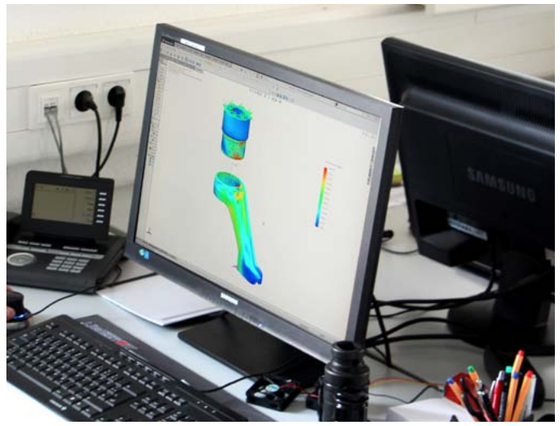
In-house training

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.

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 reation arms.
Custom reaction arms can be built and force effects simulated (FEM) in our own development department in Vaihingen/Enz.



Special reaction arms

THE FACTORY CALIBRATION CERTIFICATE

GEDORE
TOOLS FOR LIFE

Factory CALIBRATION CERTIFICATE
for Battery torque wrench

Date	10.03.2018	Manufacturer	GEDORE	Bolting Adapter:	
Type	LDA-22	Inspector	Max Mustermann	M20x90: II 1-3	
Serial No	DA09.00107	Temperature	23,1 °C	M24x120: I 1, II 4-7	
Inventory No		min. torque:	250 Nm	M30x130: I 2-4	
Model Year	2018	max. torque:	2180 Nm	M36x130: I 5-7	
		Tolerance	5 %		

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	1764						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): LPU: 201101171
1: Torque Sensor, Lorenz Messtechnik D-2271, SN: 102552, 15000 Nm
2: 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.

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 · 71665Vaihingen/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 CE
www.gedore-torque-solutions.com
Made in Germany

Individual factory calibration certificate for all planetary gear torque wrenches in the series:
LDA/LAW, 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.

OUR SUCCESS STORY

1972
Peter Neef founded a commercial agency for bolt technology.

1985
LÖSOMAT develops a square drive wrench with patented ratchet system.

2005
LÖSOMAT develops and patents the world's first automatic control system for hydraulic power units without any sensors in the hydraulic wrench.

1981
The first self-releasing counter wrench in the world, designed to counter-hold difficult bolt connections, was introduced to the market and patented.

1992
Move to new and larger administration and production facilities in Vaihingen/Enz.

2010
LÖSOMAT awarded the Plus X Award in the categories "Ease of Use" and "High Quality" for the cordless torque wrench.
Also awarded the "Best Product 2010" award.

2007
A world innovation presented here: The **LÖSOMAT** cordless torque wrench with microprocessor controlled switch-off electronics up to 4 000 Nm.

2008
LÖSOMAT becomes a wholly owned subsidiary of the Gedore Group.

2012
Company's anniversary – 40 years of **LÖSOMAT**

2017
GEDORE Torque Solutions develops the new generation of heavy-duty torque wrench with the LHD. Brushless Technology and the Powerbox make this torque wrench durable and usable in all weathers.

2017
GEDORE Torque Solutions develops the new generation of LDA high-level cordless torque wrench with low maintenance brushless technology and ergonomic design up to 6 000 Nm.

2017
GEDORE Torque Solutions develops the high-level cordless torque wrench LDA Solution with data collection function, torque angle mode, colour display and brushless technology up to 13 000 Nm.

1970 1975 1980 1985 1990 1995 2005 2010

1988
Trailblazing development and market introduction of the precision torque **LÖSOMAT** torque electric torque wrench, which achieved 13 000 Nm for the first time.
Development of the **LÖSOMAT** pneumatic torque wrench up to 13 000 Nm with pressure and torque monitoring.

1990
The **LÖSOMAT** side power wrench sets new yardsticks with a patented tandem gear train.

1991
New introduction of the **LÖSOMAT** electric torque wrench with an angled design for confined spaces.

1996
The **LÖSOMAT** hydraulic torque wrench sets new yardsticks with regards to size and weight up to 27 000 Nm.

2007
The **LÖSOMAT** HRPU series makes it possible for the first time in modern unit technology to modularly configure hydraulic units. Each module can be retrofitted.

2009
LÖSOMAT moves to new company premises with double the production area in Vaihingen/Enz.

2011
LÖSOMAT develops the LHU hydraulic unit.

2011
LÖSOMAT develops the force multiplier LKV with non-destructive overload protection and tooth flanks with a ceramic Teflon® coating.

2014
LÖSOMAT developed the rail track wrench (LDB). With this wrench, users can bolt and drill in vertical and horizontal positions as well as in dual combination on a rail car.
In 2015 **LÖSOMAT** receives the Competence Prize for Innovation and Quality Baden-Württemberg for developing the Railway Torque Wrench LDB-10.

2016
LÖSOMAT bolting technology Neef GmbH is fully integrated into the **GEDORE** Group and receives a new name:
GEDORE Torque Solutions GmbH

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

LHU

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

LHU

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

LHU

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

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CAPTIONS

Company, Services, More

Cordless Torque Wrench

Electric Torque Wrench

Pneumatic Torque Wrench

Hydraulic Solutions

Manual Solutions

Bolting Software

Torque Testing Bench Technology

Special Solutions

Weight

Square drive (internal)

Square drive (external)

Hexagonal socket drive (internal)

Input torque

Output torque

Transmission ratio

EN

GEDORE
TOOLS FOR LIFE

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