



Manual Torque Multiplier



Applications

- **alkitronic® M** manual torque multiplier - for energy independent precise tightening and loosening of heavy-duty bolt connections.
- Torques from 200 Nm up to 50,000 Nm.
- The ideal torque tool in high explosion-risk areas
- **alkitronic® M** provide safe, economic, problem-free operation. They replace impact wrenches, pipe extensions and other inadequate methods.

Advantages

- Maintenance-free, compact and robust design. They improve on-the-job safety and have short assembly times.
- Low energy input - high torque transfer.
- Integrated anti wind-up ratchet allows jobs to be performed easily, efficiently and safely.

alkitronic® specials

- The components of the **alkitronic®** power gears are manufactured using a high-precision chipless process - in order to ensure the highest possible operational demands with lowest wear.
- The shearing pin built into the drive shaft protects against input overload.

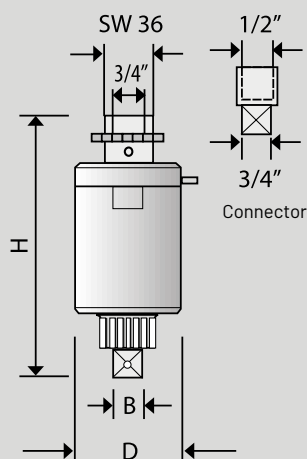


Technical Data: Model **H** (without ratchet) and **HG** (with ratchet)

Type		H10	H15	HG10	HG15	HG20	HG30	HG40	HG50	HG60	HG80
Torque up to (approx.)*	Nm	1400	1400	1400	1400	3500	5000	6000	8000	11500	50000
	lbf.ft	1035	1035	1035	1035	2580	3690	4425	5900	8480	36880
Square drive	B	1/2" / 3/4"	1"	1/2" / 3/4"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2 1/2"
Reduction ratio		4	4	4	4	16	18	20	24	28	180
Diameter	D mm	85	85	85	85	85	98	109	133	173	275
Height	H mm	180	200	180	200	235	250	280	280	290	360
Weight (approx.)	kg	3.5	4	3.5	4	5	6.5	7	11	19	58

*) When loosening a bolted connection, up to 20% higher torque may be required (loosening torque). We will gladly advise you in detail.

Dimensions



Connector:

1/2" internal square socket -
3/4" external square socket

Specifications

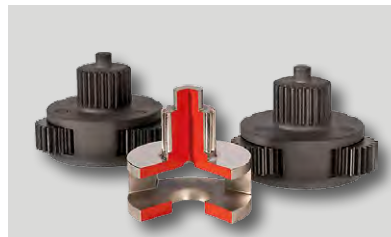
Torque Multiplier input via:

3/4" internal square socket torque wrench or conventional ratchets external hexagonal socket SW 36 mm.

Handwheel - for rough turning loose bolts/nuts.

alkitronic® manual torque multipliers are supplied with a support foot (DMA) as standard version. For support rings, backstops, ratchets, torque wrenches, and other components, please see our **alkitronic®** catalog of accessories.

alki TECHNIK GmbH reserves the right to change specifications without prior notice.



alkitronic® - power gear components



alkitronic® M operating on electricity pylons. Accurate tightening via torque wrench.

alkitronic®
HOME OF TORQUE POWER

alkitronic® products
Made in Germany by

alki TECHNIK GmbH
Development, Production and
Distribution of Bolting Systems

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MDS

Mounting
Documentation Systems



MDS traceable bolting solution

Applications

High quality bolt-connections place the highest demands on bolting technology. The powerful mounting documentation system **alkitronic® MDS** provides a fast, complete and flawless collection of torque data. **alkitronic® MDS** helps to fulfill legal regulations and to comply with international quality standards (documentation to the end user, traceable bolting parameters).

- The product range includes:
The manually operated **alkitronic® HSD**, the pneumatic operated **alkitronic® CLSD**, and the battery driven **alkitronic® EASD**. The torque multipliers are used for torque controlled bolting and reliable measurement data recording on the spot.

Advantages

General

- Optimized process safety and work safety.
- Guaranteed traceability and documented bolted joints.
- Torque can be set and record on site.
- Control panel with OLED display, display of torque in Nm or lbf.ft.

alkitronic® HSD

- Repeatability in tightening – independent of disturbances.
- Torque/torque angle procedure, manual setting, and documentation on site.
- High mobility: independent of external power supply.

alkitronic® CLSD

- Robust motor housing of cast aluminum with proven pneumatic drive.

alkitronic® EASD

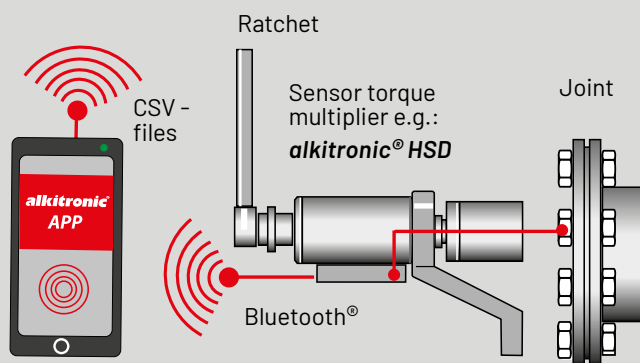
- **Health preserving:** ergonomically designed, low noise emission. No noise protection necessary.
- **Powerful and independent:** Two lithium-ion battery packs ensure up to 360 screw joints in a row.
- Exact shut-off torque even at low battery levels.

alkitronic® specials

- Torque recording and sensors directly on the square drive.
- Select individual bolting- and measurement method, several preset programs can be chosen.
- Menu-guided multilingual operation, using visual and acoustic control- or warning signals.
- Data transmission via the Bluetooth interface for communication with mobile phones and other devices, such as tablets.
- **alkitronic® APP** developed for measurement data recording and fast data transmission.



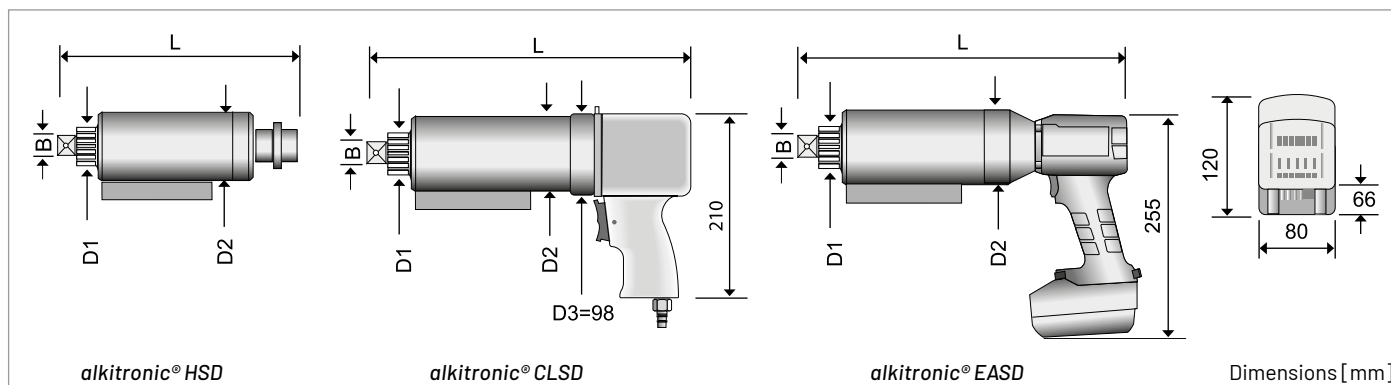
alkitronic® APP application scheme



alkitronic® APP app for iOS® and android® mobiles and platform independent data exchange via CSV file transfer.

Image on the upper right: **alkitronic® HSD** and on the lower right: **alkitronic® CLSD** and **alkitronic® EASD**.

Technical Data



Models HSD / CLSD / EASD

Type			HSD 100	HSD 200	HSD 400	CLSD 100	CLSD 200	CLSD 400	EASD 100	EASD 200	EASD 400
Measuring range approx.	Nm		100-1000	200-2000	400-4000	100-1000	200-2000	400-4000	100-1000	200-2000	400-4000
Power (max)	Nm		1000	2000	4000	1000	2000	4000	1000	2000	4000
Square drive	B		1"	1"	11/2"	1"	1"	11/2"	1"	1"	11/2"
Diameter (approx.)	D ₁	mm	54	54	72	54	54	72	54	54	72
Diameter (approx.)	D ₂	mm	88	88	98	88	88	98	88	88	98
Length (approx.)	L	mm	220	295	320	360	390	410	370	405	425
Weight without DMA approx.	kg		6,4	7,6	11,35	10	11,25	15	8,7	10	13,5
Idle speed gear I	r/min		-	-	-	11	5	3,5	5	2	1
Idle speed gear II	r/min		-	-	-	-	-	-	18	6,5	4

Operation panel/sensoric: Measurement accuracy: +/- 1% / Temperature range: 0 to +50° C

Overview of the programs 1 to 5 (Programs for HSD: 1-4, for CLSD / EASD: 1 and 5, only)

1 Tightening with specified torque

- Torque controlled bolting, bolt connections with target values and tolerance levels.

2 Tightening with torque/angle procedure

- Pre-torque and angle can be preset.
- Tolerance specification for the final torque (control of bolting quality).
- Storage of actual torque and angle.

3 Checking of torque

- Monitoring of already tightened bolt connections.

- Determination of already loosened torque values.
- Repeatable testing method with specified angle.
- CCW: Determination of the starting torque.

4 Determination of required angle

- For testing and development purposes. Pre-torque and target resp. final torque are specified.
- Measurement and storage of the reached angle.

5 Display actual torque only with models EASD and CLSD

- Display and recording of the actual torque.

Operating range HSD / CLSD / EASD with OLED graphic display

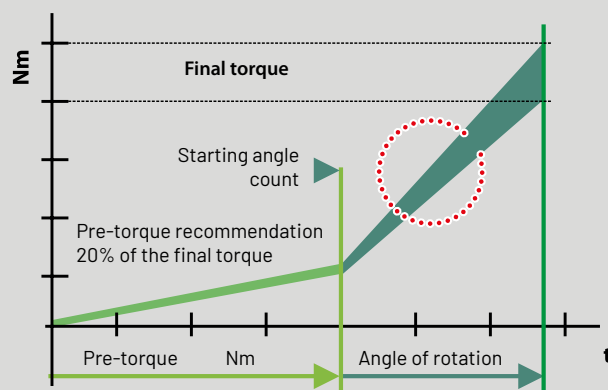
Example for menu-guided operation (HSD)



Examples Display image in mode "Program 1"

Select units (Nm/ft.lb) and language (German, English) during setting (image 2). Image 3 shows setting of bolting parameters. Image 4 shows the amount of boltings. Alarms and other notifications made by visual and acoustic signals.

Diagram for program 2 and 4



Information on rotational angle setting for torque/angle procedure

- pre-torque and angle of rotation are specified constructively for the bolting connection.
- The angle of rotation can be determined individually and easily with the alkitronic® HSD.



YOUR PLUS FOR MORE PERFORMANCE

Increased quality

- Premium production
- Highest quality materials
- Long product life cycles
- 30 years experience in bolting technology
- Made in Germany – international patents

Increased precision

- Precise, customer-specific torques
- High repeatability
- Reliability in permanent operation
- Dokumentation of tightening results
- Automatic shut-off

Increased productivity

- Quicker tightening without reworking
- No environmentally caused failures (IP54, ATEX)
- High work safety
- Easy to use: clear, simple instructions
- Low maintenance and cost efficient

Better service

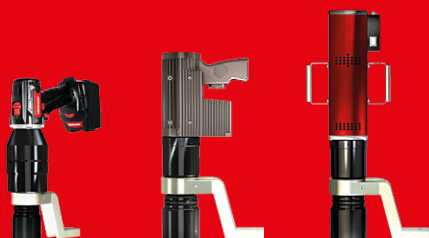
- Technical advice on site
- Training offers
- Manufacturer's calibration and certification
- Lifecycle support
- Spare part and repair service

alki TECHNIK GmbH

Development, Production and Distribution of Bolting Systems

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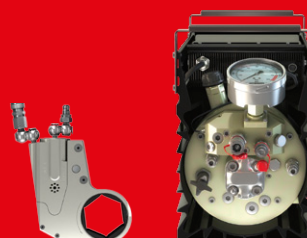
EXTRACT FROM OUR PRODUCT RANGE



Electric Torque Multiplier



Pneumatic Torque Multiplier



Hydraulic Wrenches and Pumps



Manual Torque Multiplier