



SPECIALISED FORCE
HYDRAULIC TOOLS & PTY. LTD.
ELECTRICAL CONTRACTORS EQUIPMENT

EXCLUSIVE DISTRIBUTOR OF

alkitronic®

HOME OF TORQUE POWER



M SERIES



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.



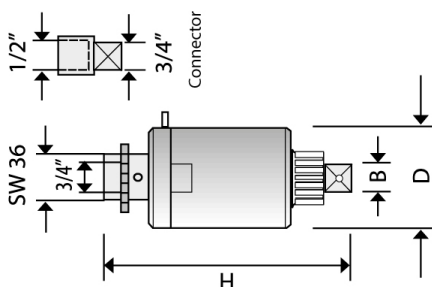
Specifications

- 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, back stops, ratchets, torque wrenches, and other components, please see our alkitronic® catalog of accessories.

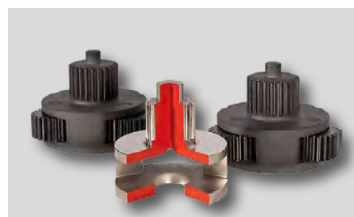
Technical Data: HG (with ratchet)

Type		HG10	HG15	HG20	HG30	HG40	HG50	HG60	HG80
Torque up to (approx.) *	Nm	1400	1400	3500	5000	6000	8000	11500	50000
	lbf.ft	1035	1035	2580	3690	4425	5900	8480	36880
Square drive	B	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	16	18	20	24	28	180
Diameter	D mm	85	85	85	98	109	133	173	275
Height	H mm	180	200	235	250	280	280	290	360
Weight (approx.)	kg	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.



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



alkitronic® - power gear components



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

M-SD traceable bolting solution

alkitronic®

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

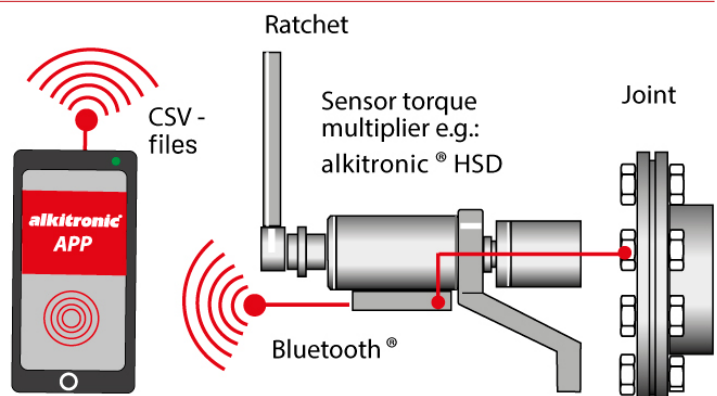
- Health preserving: ergonomically designed, low noise emission.
- No noise protection necessary.
- Powerful and independent: Two lithium-ion battery packs ensure up to 360 screw joints in a row.
- Exact shut-off torque even at low battery levels.

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.



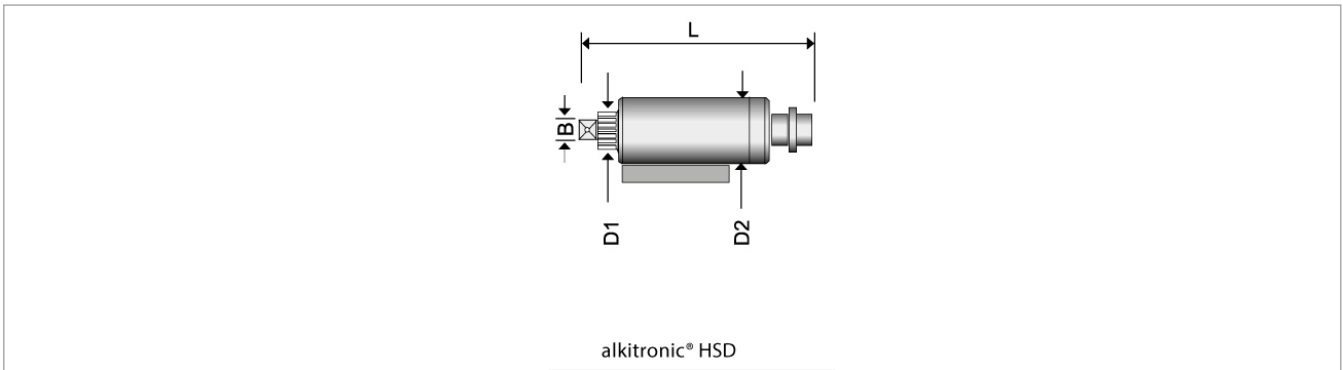
MANUAL SERIES

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M-SD traceable bolting solution



Technical Data



Type		HSD		
		HSD 100	HSD 200	HSD 400
Measuring range approx.	Nm	100-1000	200-2000	400-4000
Power (max)	Nm	1000	2000	4000
Square drive	B	1"	1"	1 1/2"
Diameter (approx.)	D1	mm	54	72
Diameter (approx.)	D2	mm	88	98
Length (approx.)	L	mm	220	320
Weight without DMA approx.kg			6,4	7,6
Idle speed gear I	r/min	-	-	-
Idle speed gear II	r/min	-	-	-

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

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

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

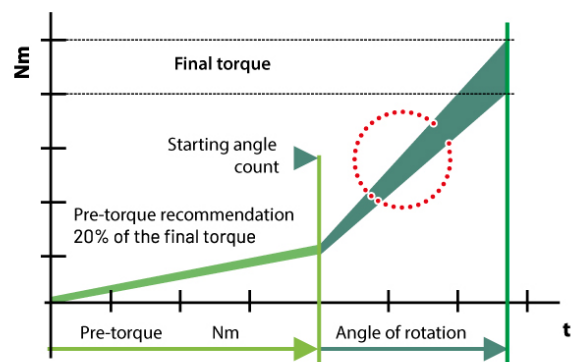
Example for menu-guided operation (HSD)



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

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

XCE & X-ML SERIES

alkitronic® Norwolf specialty products

The alkitronic® Norwolf Missing Link™ - the most revolutionary manual torque multiplier for applications where standard tools don't fit. The alkitronic® Norwolf XCE Link™ is essentially a Missing Link™ with the ability to turn continuously.

Missing Link

The Missing Link™ torque multiplier fits into tightly confined areas where sockets will not fit. The Missing Link™ has become standard in the wind industry for generator feet and yaw pucks. Available in 4:1 or 6:1 ratios. The newly re-designed 6:1 Missing Link™ fits in the narrowest of confines while maintaining a high power to weight ratio.

Advantages

- Accurate - operates using levers, not gears.
- No overload pins to break - creates safer working environment.
- Uses ratchet or non-ratchet wrenches.
- Optional reaction arm permits operator to react on the same plane.
- Input force is same direction as reaction force for maximum operator convenience.

XCE Link

The alkitronic® Norwolf XCE Link™ is the ultimate answer for gaining access where standard pneumatic multipliers are too tall or bulky to fit application. Available in 3:1 or 4:1 ratios. There are two available styles. The standard style has a sliding pin with which to react with any standard torque multiplier. The hub style has a specific splined hub to match the input tool of choice.

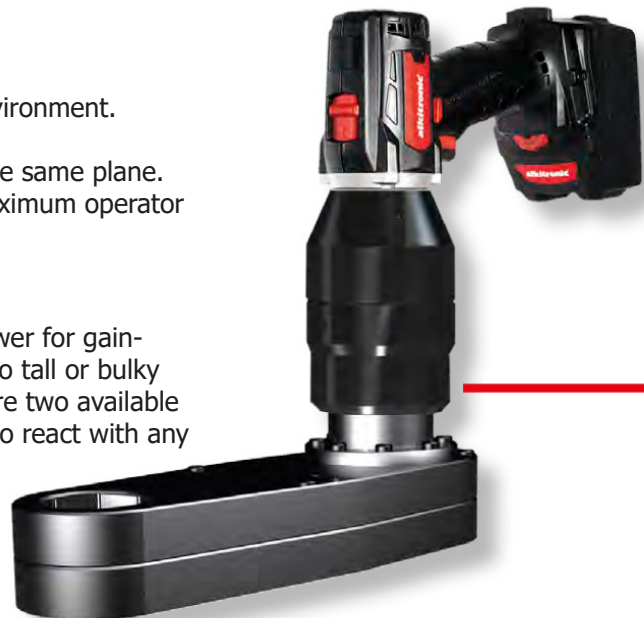
Advantages

- Totally enclosed aluminum housing.
- Available in two styles: pin or hub reaction.
- Continuous rotation for use with any alkitronic® pneumatic or electric multiplier.
- Available in special configurations.
- Gearless internal design offers long service life..



Application Example: The Missing Link™ when fitting a coupling in plant construction. The Missing Link™ fits more applications than any other wrench.

alkitronic®



XCE Link™ with hub style to match the input of all alkitronic® torque tools. Continuous rotation for use with any electric or pneumatic driven torque multiplier.



Missing Link™ - the manual torque multipliers are available with spanner sizes from 22 mm to max. 80 mm and ratios of 4:1, 6:1. The Missing Link™, the most suitable multiplier for every bolting connection.

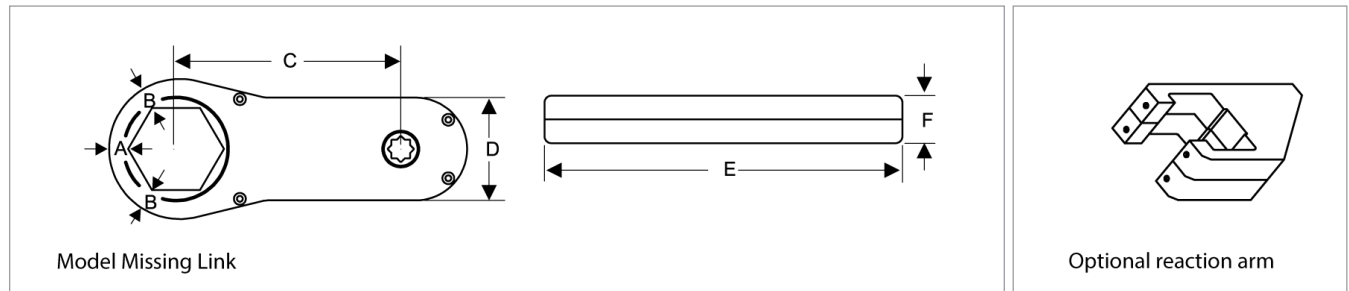
MANUAL SERIES

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TORQUE MULTIPLIER - RADIAL OR TANGENTIAL GEARING

XCE SERIES

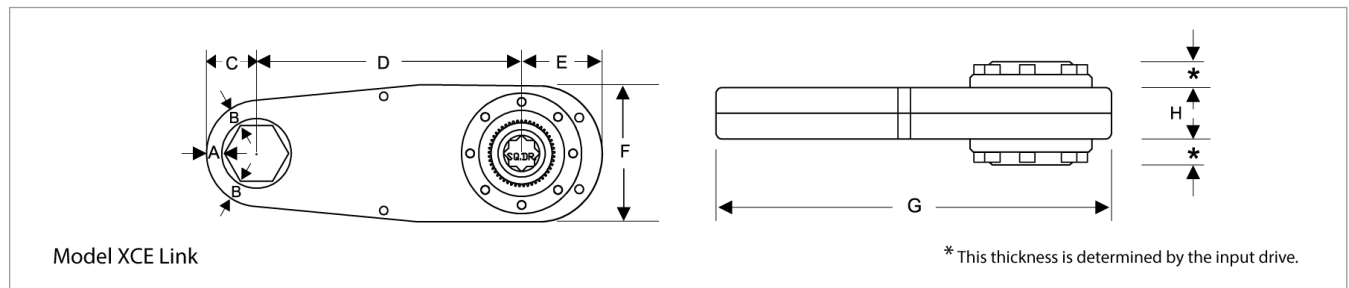
Technical Data



Models Missing Link M-ML - 1/2", 4:1 Ratio - max. 340 Nm input / 1360 Nm output												
SW	22	24	27	30	32	36	41	46	50	55	60	C 151mm
A mm	13,5	12	11.1	12	11.1	11.1	11.1	11.1	11.1	11.1	11.1	D 70mm
B mm	15.1	13.5	12.7	13,5	12.7	12.7	12.7	12.7	12.7	12.7	12.7	F 32mm
E mm	222	222	222	226	226	228	231	234	236	239	242	

Models Missing Link M-ML - 3/4", 4:1 Ratio - max. 815 Nm input / 3260 Nm output																
SW	22	24	27	30	32	36	41	46	50	55	60	65	70	75	80	C 212mm
A mm	21.3	20.3	18.8	17.3	16.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	D 95mm
B mm	23.6	22.6	21.1	19.6	18.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	F 45mm
E mm	309	309	309	309	309	309	312	315	317	320	323	325	328	331	334	

Models Missing Link M-ML - 3/4", 6:1 Ratio - max. 815 Nm input / 4890 Nm output										
SW	32	36	41	46	50	55	60	65	70	C 355mm
A mm	23.3	21.3	18.8	14.3	16.3	14.3	14.3	14.3	14.3	D 102mm
B mm	25.6	23.6	21.1	18.6	16.6	16.6	16.6	16.6	16.6	F 45mm
E mm	476	476	476	476	476	479	481	484	487	



Models XCE Link - 3/4", 3:1 Ratio - max. 1150 Nm input / 3450 Nm output														
SW	24	27	32	36	41	46	50	55	60	65	70	75	80	D 156 mm
A mm	10	11	11	12	12	13	13	14	14	15	15	16	16	E 60 mm
B mm	11	11	12	12	13	13	14	14	15	15	16	16	17	F 102 mm
C mm	25	27	30	33	36	40	42	46	49	53	56	59	63	H 38mm
G mm	241	243	246	249	252	256	258	262	265	269	272	275	279	

Models XCE Link - 1", 3:1 Ratio - max. 2440 Nm input / 7320 Nm output														
SW	50	55	60	65	70	75	80	90	100	105	110	115	120	D 208 mm
A mm	13	14	14	15	15	16	16	17	18	19	20	20	21	E 80 mm
B mm	14	14	15	15	16	16	17	18	19	19	20	20	21	F 137 mm
C mm	42	46	49	53	56	59	63	70	76	80	83	87	90	H 51 mm
G mm	330	334	337	341	344	347	351	358	364	368	371	375	378	

Models XCE Link - 3/4", 4:1 Ratio - max. 1150 Nm input / 4600 Nm output														
SW	24	27	32	36	41	46	50	55	60	65	70	75	80	D 196 mm
A mm	10	11	11	12	12	13	13	14	14	15	15	16	16	E 60 mm
B mm	11	11	12	12	13	13	14	14	15	15	16	16	17	F 102 mm
C mm	25	27	30	33	36	40	42	46	49	53	56	59	63	H 38 mm
G mm	281	283	286	289	292	296	298	302	305	309	312	315	319	

Models XCE Link - 1", 4:1 Ratio - max. 2440 Nm input / 9760 Nm output														
SW	50	55	60	65	70	75	80	90	100	105	110	115	120	D 262 mm
A mm	13	14	14	15	15	16	16	17	18	19	20	20	21	E 80 mm
B mm	14	14	15	15	16	16	17	18	19	19	20	20	21	F 137 mm
C mm	42	46	49	53	56	59	63	70	76	80	83	87	90	H 51 mm
G mm	384	388	391	395	398	401	405	412	418	422	425	429	432	