

alkitronic®
HOME OF TORQUE POWER



***Electric, Battery,
Pneumatic &
Hand-Operated
Torque Wrenches***



specialisedforce.com.au

OVERVIEW

Since 1984, Alkitronic has been a leading manufacturer of high-quality torque multipliers and specialised bolting equipment for extreme industrial applications. With its headquarters in Ingolstadt, Germany, Alkitronic develops and manufactures patented electric, pneumatic, manual and battery-driven torque multipliers. Alkitronic makes no compromises when it comes to performance, accuracy, efficiency, productivity and safety. The exceptional quality of our German-made torque multipliers gives you a competitive edge in performance. Specialised Force has proudly served as the official Alkitronic distributor in Australia since 1991. All Alkitronic products are available through our nationwide network of nine branches, supported by seven repair shops for comprehensive aftersales service and support.

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POWERED BY EINHELL

Alkitronic is proud to partner with Einhell, a global leader in battery-powered tools and garden equipment, headquartered in Landau an der Isar, Bavaria. Alkitronic battery torque multipliers are equipped with two batteries and a charger as standard and rely on Einhell's innovative Power X-Change battery platform — renowned for its high quality, powerful performance and long-lasting durability. These batteries are used not only in demanding industrial applications but also by the Mercedes-AMG PETRONAS Formula One Team.



EINHELL & OZITO

In Australia and New Zealand, while Einhell does not have an official distributor, its battery technology is widely available through the Ozito brand, which Einhell acquired in 2013. Einhell and Ozito 18V Power X-Change batteries and chargers are fully compatible and readily available at Bunnings.



THE ALKITRONIC BRAND STANDS FOR:



Quality:

Alkitronic products are engineered and manufactured in Germany to the highest standards.



Experience:

Since 1984, Alkitronic has built vast and exceptional expertise in bolting technology.



Manufacturing:

Alkitronic offers premium production using high-quality materials and strict quality standards.



Service:

Alkitronic backs its products with seven authorised repair shops across Australia, providing comprehensive aftersales service and support.



Innovation:

Alkitronic continuously invests in research and development to drive improvements and develop cutting-edge technologies.

WHY CHOOSE ALKITRONIC

DIVERSE PRODUCT RANGE

The Alkitronic product range is highly diverse and offers solutions tailored to individual needs:

- Electric Torque Multipliers
- Battery-Driven Torque Multipliers
- Pneumatic Torque Multipliers
- Manual Torque Multipliers

TRUSTED BY INTERNATIONAL INDUSTRY LEADERS

Alkitronic tools are trusted by leading international companies that rely on their proven quality, including: Audi, BMW, Caterpillar, Komatsu, Liebherr, MAN, Siemens, ThyssenKrupp and many more.

HIGH PRODUCT QUALITY

From concept to completion, all products are created, designed, and distributed by a single reliable and experienced source, backed by German state-of-the-art engineering.

- Long product life thanks to high-quality materials such as aluminium
- High break resistance and stability, reducing the risk of failure
- Robust and reliable force multipliers suitable for demanding industrial applications
- Lower running and maintenance costs compared to plastic housings



WHY CHOOSE ALKITRONIC

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PRECISION

All Alkitronic torque tools consistently deliver exceptional accuracy, with a maximum deviation of $\pm 3\%$ within the required torque range.

- Constant accuracy across all bolting connections
- Fast, safe processing with no need for rework
- Reliable achievement of target torque values

EFFICIENCY

Alkitronic brushless motors guarantee high efficiency and reliability.

- Greatly reduced risk of failure
- No hidden maintenance or repair costs
- Fast return on investment
- Quiet operation compared to brushed motors
- Active speed regulation
- Constant torque output, even at low battery levels (for battery tools)

INTUITIVE DESIGN

Compact and innovative design ensures user-friendly handling and easy navigation.

- Ideal for confined spaces
- No extensive training required
- Simple one-finger trigger for forward and reverse
- Ergonomic, comfortable and safe operation
- Safe and health-conform operation, e. g. the 360° rotating EC handle prevents reaction forces being transferred to the operator

PERMANENTLY HIGHER JOINT QUALITY

Compared to ratcheting or impact wrenches the alkitronic® tools perform bolting connections by rotating continuously and applying the exact torque value, all in one work step.

- pretension force is reached with high accuracy
- quality of the bolting connection is greatly increased
- faster and safer than ratcheting bolting procedures

DIGITAL CONNECTIVITY

(available on new-generation models) Alkitronic torque tools offer simple digital documentation features.

- Bluetooth interface with Alkitronic app
- Documentation of completed bolted joints

SAFE & HIGH-QUALITY BOLTING WITH AUTOMATIC MOTOR SHUT-OFF

Alkitronic electric torque multipliers automatically shut off once the required torque is reached.

- Intelligent, processor-controlled motor ensures accurate pre-set torque
- Prevents overtightening of the bolting connection
- Increases operator safety
- Extends bolted joint lifespan

WORLDWIDE & VOLTAGE-INDEPENDENT USE

The brushed motors achieve torque via voltage control. Alkitronic brushless motors are current-controlled (amps). This enables Alkitronic to detect and compensate the temperature increase of the motor during operation.

- Due to the built-in power supply in the EC and EF, Alkitronic can always achieve the same torque within a voltage range of 100–253 V / 45–66 Hz.
- Even with very long electrical extension cables, when the voltage drops, we have no loss of torque.

SUITABLE FOR ALL WEATHER CONDITIONS

The protection class IP54 specifies the suitability of Alkitronic electrical components for various ambient conditions, as well as the protection of users against potential hazards during operation.

- Ensures productivity and safety when working in moist, dusty, or dirty conditions
- Alkitronic tools are dustproof and splashproof
- Suitable for a wide range of applications














SERVICE & TRAINING

Specialised Force, in partnership with Alkitronic, goes beyond tools by offering a full range of services and training support.

- On-site technical advice
- Customised training sessions
- Manufacturer-certified calibration and certification
- Comprehensive spare parts and repair service
















SINGLE-PHASE ELECTRIC & BATTERY-OPERATED

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Series	Description	Type	Sq. Dr. (inch)	Torque (Nm)	Image	Page no.	
XE-Series	EC Models Intelligent allrounder with sensorless control and ±2% accuracy. Features a brushless motor, IP54 protection and OLED display. Ergonomic 360° rotatable unit reduces reaction force on wrist. Ideal for high-precision, low-maintenance bolting. IP54-certified	EC-S	Straight standard version	3/4" 1" 1 1/2"	70 – 6,530		6-7
		EC-A	Angled tool for hard-to-reach bolting applications	1" 1 1/2"	70 – 6,530		6-7
		EC-R	Radial gear for bolting connections on plate heat exchangers	n/a	480 – 3,840		18-20
		EC-SG	Lateral gear for bolting connections on plate heat exchangers	n/a	480 – 3,840		18-20
	EF Models Reliable, low-maintenance, high-torque power tool with a high-speed brushless motor for heavy-duty applications. The tool offers consistent performance and ±2% accuracy. Features include IP54 protection, an OLED display and intuitive menu-guided control. The ergonomic 360° rotatable unit reduces reaction force on the wrist. IP54-certified	EF-S	Straight standard version	1" 1 1/2" 2 1/2"	430 – 42,000		8-9
		EF-A	Angled tool for hard-to-reach bolting applications	1 1/2"	900 – 9,800		8-9
		EF-R	Radial gear for bolting connections on plate heat exchangers	n/a	560 – 3,780		18-20
		EF-SG	Lateral gear for bolting connections on plate heat exchangers	n/a	560 – 3,780		18-20
	EAF Models Trusted performer: Battery-driven 2-speed mechanical torque multiplier with brushless synchronous motor. Fast gear for run-down and power gear for maximum torque and precision. IP54-certified	EAF-R	Radial gear for bolting connections on plate heat exchangers	n/a	560 – 3,480		18-20
		EAF-SG	Lateral gear for bolting connections on plate heat exchangers	n/a	560 – 3,780		18-20
	EB Models Battery-driven single-speed digital torque multiplier with a brushless synchronous motor and smart processor-controlled automatic shut-off. Award-winning lightweight, ergonomic design minimizes impact on the wrist. Includes smart functions, Bluetooth and an anti-glare OLED display . IP54-certified	EB-S	Straight standard version	3/4" 1" 1 1/2"	110 – 6,000		10-11
		EB-S 2HO	The two-hand control design	3/4" 1" 1 1/2"	110 – 6,000		10-11
		EB-N	Wheel bolting applications up to 18" extension	3/4" 1"	480 – 3,500		14
		Exclusive solution for DAF & MAN engines					

PNEUMATIC & HAND-OPERATED

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Series		Description	Type		Sq. Dr. (inch)	Torque (Nm)	Image	Page no.
XP-Series	Pneumatic	<p>PC Models</p> <p>The indestructible partner: Pneumatic torque multiplier with continuous rotation—no impact—for improved torque accuracy, higher power and reduced maintenance. Compact and durable with high-performance gearbox and robust aluminum housing.</p> <p>ATEX-certified for hazardous explosive areas</p>	PC-S	Ergonomic 360° rotatable unit reduces reaction force (formerly CLD)	3/4" 1" 1 1/2"	305 – 9,795		16-17
			PC-N	Wheel bolting applications up to 18" extension (formerly CLD-N)	3/4" 1"	150 – 3,460		14
			PC-F	Straight standard unit not rotatable (formerly CLS)	1/2" 3/4" 1"	75 – 3,460		16-17
			PC-F 2	Fixed + fast gear for pre-tightening or initial turning (formerly CLS2)	3/4" 1" 1 1/2" 2 1/2"	120 – 13,890		16-17
			PC-R	Radial gear for bolting connections on plate heat exchangers (formerly RCL2)	n/a	250 – 4,800		18-20
			PC-SG	Lateral gear for bolting connections on plate heat exchangers (formerly RCL2-SG)	n/a	251 – 4,800		18-20
			PC-SD	Integrated torque sensor for precision bolting in critical joints (formerly CLSD)	3/4" 1"	100 – 4,000		22-23
			PV-F	Remote-controlled pneumatic tool for explosive/hazardous areas	1/2" 3/4" 1"	60 – 3,500		15
XM-Series	Manual	<p>HG, ML/XCE & SD Models</p> <p>Manual hand multipliers replace unsafe, imprecise impact wrenches and makeshift tools. Precision locking prevents back-turning when ratcheting. Built for robust power transmission under extreme loads.</p>	M-HG	Manual torque multiplier for heavy-duty bolting	n/a	200 – 50,000		21
			ML / XCE	Revolutionary manual multiplier for hard-to-reach bolting	n/a	200 – 50,000		24-25
			M-SD	Manual torque multiplier with integrated sensor for precision bolting	n/a	200 – 50,000		22-23
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EC SERIES

APPLICATIONS

- Alkitronic EC-S / EC-A electric torque multipliers from 75 to 6,530 Nm (55 to 4,815 ft.lbs).
- Consistent torque accuracy on all international power supplies 100 - 253 V / 45 - 66 Hz.
- Precise shut-off with on-site voltage-controlled portable generators.
- Models Alkitronic EC-A angled tools, low height for difficult access applications.

ADVANTAGES

- Safe interruption-free work in any weather (moisture, rain) - thanks to protection class IP54.
- Low running costs:
- Low-wear, maintenance-free, brushless synchronous motor.
- Permanent higher joint quality by continuous rotation of the square drive.
- Simple 1-finger trigger operation for forward and reverse.
- OLED-Display anti-glare and high contrast - for perfect reading under all weather conditions.
- Menu-guided intuitive operation, with control and warning signals.
- Ergonomic and comfortable operation:
- The 360 degree rotating handle prevents reaction forces being transferred to the operator.

ALKITRONIC SPECIALS

- High-quality bolting, according to torque/angle procedure.
- Highly innovative generation of electric torque multipliers with new sensorless control motor technology. Lower power consumption increases the service life of the electronic components.
- Repeat shut-off accuracy $\pm 2\%$ for the same bolting application.
- Precise reproduction of preselected torque through intelligent, processor-controlled motor with automatic shut-off.
- Longer service life: Low heat generation - thus highest reliability and almost no downtime.
- Robust and long lasting: Motor housing of cast aluminum.

TECHNICAL DATA

Bolting programs:

For user-specific applications, the manufacturer can activate optional modular software (Alkitronic EC-S / EC-A from serial number 712700).

- Software suite 1:** Torque controlled bolting (pre-installed)
- Software suite 2:** Torque/angle procedure for high-quality bolting connections
- Premium:** Torque/angle procedure with adjustable max. torque limit
- Software suite 3:** Bolting with preset rotations and torque limit
- Software suite 4:** Bolting parameters according to individual customer requirements
- Software suite 5:** Bluetooth transmission via Alkitronic APP
Documentation of the bolted joints
(target-actual status, recording for each joint)

Special solution: Preset torque increment according to customer's requirement (10 Nm / 10 ft.lbs min). All Alkitronic torque multipliers with CE-certification.

Electrical data:

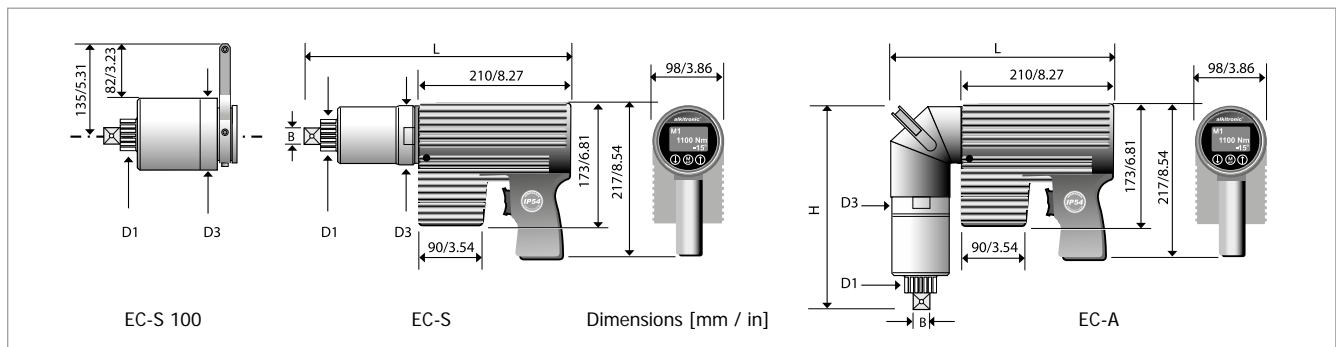
Universal AC input 100 V – 253 V, frequency 45 Hz – 66 Hz, power max. 1100 W, protection category I, protection class IP 54 (standard).

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SPECIFICATIONS

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MODELS EC-S

Type	ECS 10	ECS 20	ECS 30	ECS 35	ECS 40	ECS 50	ECS 60	ECS 65	ECS 70	ECS 80	ECS 90	ECS 100
Torque range (approx.) * Nm	75-420	80-680	100-940	150-1300	150-1590	190-1870	250-2340	290-2930	350-3470	440-4400	500-5300	650-6530
ft.lbs	55-305	60-500	75-690	110-960	110-1170	140-1380	185-1725	215-2160	260-2560	325-3245	370-3910	480-4815
Square drive B	3/4"	3/4"	3/4"	3/4"	1"	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Diameter (approx.) D1 mm	41	41	41	41	54	54	54	54	72	72	72	72
Diameter (approx.) D3 mm	88	88	88	88	88	88	88	88	98	98	109	109
Length (approx.) L mm	330	330	330	352	382	382	388	388	406	406	405	430
Weight without DMA** (approx.) kg	9	9	9	9	10	10	11	11	13	13	14.5	15.5
Idle speed rpm	70	40	30	22	15	14	11	8	7	5	4	3

MODELS EC-A

Type	ECA 50	ECA 60	ECA 65	ECA 70	ECA 80	ECA 90	ECA 100
Torque range (approx.) * Nm	190-1870	250-2340	290-2930	350-3470	440-4400	500-5300	650-6530
ft.lbs	140-1340	185-1725	215-2135	260-2540	325-3205	370-3730	480-4800
Square drive B	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Diameter (approx.) D1 mm	54	54	54	72	72	72	72
Diameter (approx.) D3 mm	88	88	88	98	98	109	109
Length (approx.) L mm	310	310	310	318	318	326	315
Weight without DMA** (approx.) kg	300	305	305	315	315	345	350
Idle speed rpm	14	14	14	16	16	17	18
Idle speed rpm	14	11	8	7	5	4	3

*) When loosening bolts, a higher torque (up to 20 %) may be necessary (release torque). We will be pleased to help you with your choice. **) Torque reaction arm

Display views

Software suite 1 (mode 1) and software suite 2 (mode 2)

Mode 1 / M1 (Standard)



Bolting via torque.
Automatic relief according to
pre-set angle degrees.

Mode 2 / M2 (Option)

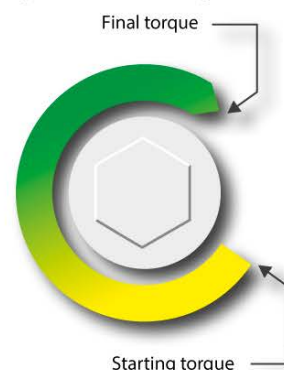


Torque/angle procedure for high-
quality bolting connections. Display
example of pre-torque, angle and
loosening angle.

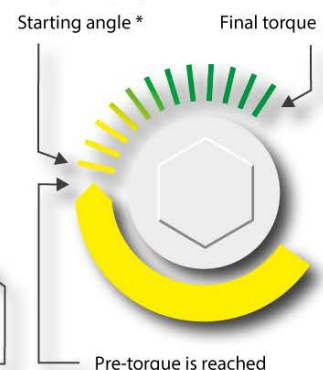
During the bolting process, the current torque value is shown in the display. Reaching the set value is indicated by an "OK". If the selected value cannot be achieved, the bolting operation is evaluated as "nOK".

Scheme bolting programs

Torque controlled bolting mode 1



Torque/angle procedure mode 2



* Information on rotational angle setting for torque/angle method:

- The angle of rotation is specified specifically for the bolting connection.
- The angle of rotation can be determined individually and easily with alkitronic® HSD. We will gladly provide you with detailed product information.

EF SERIES

APPLICATIONS

- Alkitronic EF-S electrical torque multipliers for torques of 430 to 42,000 Nm (315 to 30,980 ft.lbs).
- Consistent torque accuracy on all international power supplies.
- Precise shut-off torque also operates with voltage-controlled portable generators.
- Models Alkitronic EF-A in angled design for high operating comfort in confined spaces for torques of 900 to 9,800 Nm (665 to 7,230 ft.lbs).

ADVANTAGES

- Low running costs due to maintenance-free, low-wear, brushless synchronous motor with excellent efficiency.
- High motor speed: Up to three times faster than conventional electrical torque multipliers.
- Permanent higher joint quality compared to ratchet torque tools by continuous rotation of the square drive.
- Menu-guided intuitive operation, with control and warning signals.
- OLED-Display anti-glare and high contrast - for perfect reading under all weather conditions.
- Comfortable working due to the 360° rotatable motor unit, hardly any reaction forces are transmitted to the user.

ALKITRONIC SPECIALS

- Quality bolting with torque/angle method.
- Innovative motor protection with automatic shutdown to ensure bolting quality.
- Intelligent processor-controlled shut-off electronics for constant exact reproduction of the preselected torque.
- Repeat shut-off accuracy $\pm 2\%$ for the same bolting application.
- Exceptionally robust motor housing (aluminum alloy).
- For safe, comfortable tool guidance, model-specific operating and holding handles are included in the scope of delivery. These can be mounted as required at several fastening points provided.

TECHNICAL DATA

All Alkitronic electric torque multipliers have CE-certification. Universal AC input 100 V - 253 V, frequency 45 Hz - 66 Hz, power max. 1400 W. Protection category I.

Bolting programs:

For user-specific applications, modular software packages can be optionally purchased.

- Software suite 1:** Torque controlled bolting (standard)
- Software suite 2:** Torque/angle procedure for high-quality bolting connections
- Premium:** Torque/angle procedure with adjustable min./max. torque limitation
- Software suite 3:** Bolting with preset rotations and torque limit
- Software suite 4:** Bolting parameters according to individual customer requirements
- Software suite 5:** Bluetooth transmission via Alkitronic APP
- Documentation of the bolted joints (target-actual status, recording for each joint)

Software suite 1 is pre-installed in the basic equipment. The setting steps of the torque values are in increments of 10 Nm or 10 ft.lbs.



Display views

Software suite 1 (mode 1) and software suite 2 (mode 2)

Mode 1 / M1 (Standard)



Bolting via torque. Automatic release according to pre-set angle degrees.

Mode 2 / M2 (Option)

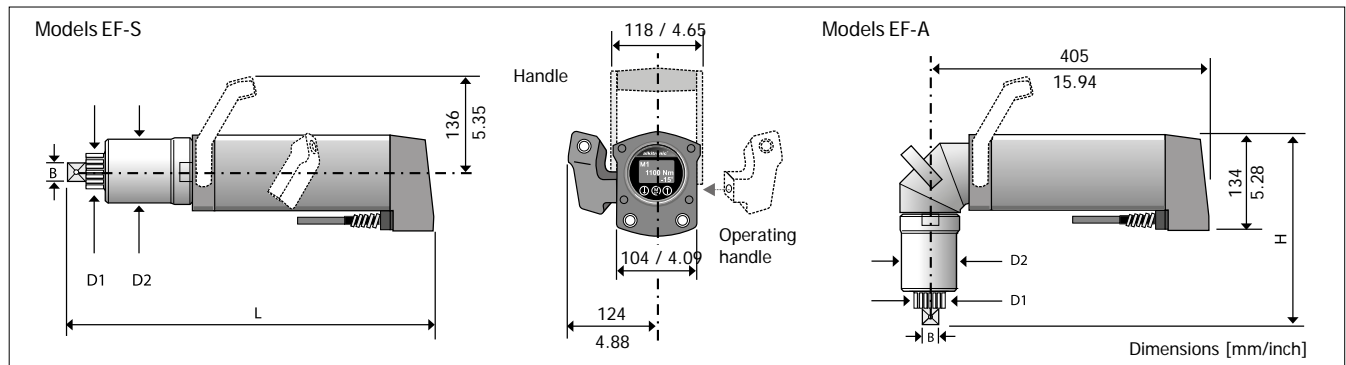


Torque/angle procedure for high-quality bolting connections. Display example of pre-torque, angle and release angle.

During the bolting process, the current torque value is shown in the display. Reaching the set value is indicated by an "OK". If the selected value cannot be achieved, the bolting operation is evaluated as "nOK".

SPECIFICATIONS

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MODELS EF-S

Type	EFS 250	EFS 300	EFS 400	EFS 600	EFS 800	EFS 1000	EFS 2000	EFS 4000
Torque range (approx.)* Nm	430-2700	500-3100	900-4300	1150-6200	2000-7800	2050-9500	3500-20600	6200-42000
ft.lbs	315-1990	370-2285	665-3170	850-4575	1475-5755	1510-7010	2580-15195	4575-30980
Square drive B	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2 1/2"	2 1/2"
Diameter (approx.) D1 mm/in	54 / 2.13	72 / 2.83	72 / 2.83	72 / 2.83	72 / 2.83	91 / 3.58	SW 120 / A/F 4.7	SW 120 / A/F 4.7
Diameter (approx.) D2 mm/in	85 / 3.35	98 / 3.86	98 / 3.86	109 / 4.29	133 / 5.24	173 / 6.8	275 / 10.83	275 / 10.83
Length (approx.) L mm/in	515 / 20.3	535 / 21	535 / 21	550 / 21.6	550 / 21.6	565 / 22.2	760 / 30	760 / 30
Weight without DMA** (approx.) kg/lbs	13 / 29	14 / 31	14.5 / 32	16 / 35	19.5 / 43	27 / 59.5	60 / 132	62 / 137
Idle speed rpm	10	8	6	5	4	3	1	0.7

MODELS EF-A

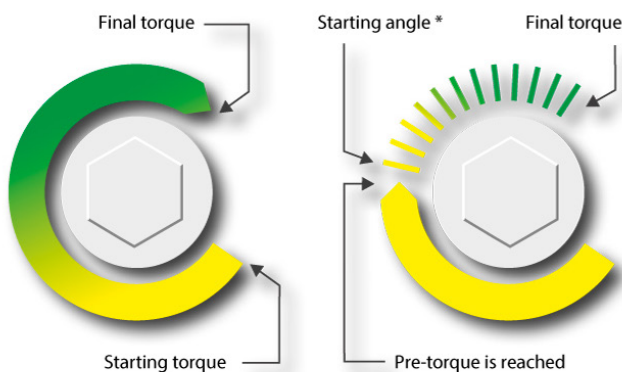
Type	EFA 400	EFA 600	EFA 800	EFA 1000
Torque range (approx.)* Nm	900-4300	1150-6200	1060-8000	2050-9800
ft.lbs	665-3170	850-4575	780-5900	1510-7230
Square drive B	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Diameter (approx.) D1 mm/in	72 / 2.83	72 / 2.83	72 / 2.83	91 / 3.58
Diameter (approx.) D2 mm/in	98 / 3.86	109 / 4.29	133 / 5.24	173 / 6.8
Height (approx.) H mm/in	320 / 12.6	350 / 13.8	350 / 13.8	380 / 15
Weight without DMA (approx.) kg/lbs	15.5 / 34	17.5 / 38.6	20 / 44	29 / 64
Idle speed rpm	5	4	3	2

*) When loosening bolts, a higher torque (up to 20 %) may be necessary (release torque). We will be pleased to help you with your choice. **) Torque reaction arm

Scheme bolting programs

Accessories: Remote control with operating handles

Torque controlled bolting mode 1 Torque/angle procedure mode 2



- * Information on rotational angle setting for torque/angle method.
- The angle of rotation is specified by the design for the bolting connection.
 - The angle of rotation can be determined individually and easily with alkitronic® HSD. We will gladly provide you with detailed product information.

The alkitronic® EF bolting system.
Extremely flexible with the alkitronic® remote control as an accessory:
alkitronic® FB - EF - cable length 5 m or 10 m

EB SERIES

APPLICATIONS

- Alkitronic EB: Battery-driven torque multiplier from 170 Nm to 6,000 Nm /125 ft.lbs to 4,425 ft.lbs.
- Extremely mobile and always ready for use: Innovative product design for comfortable working - independent of external power supply.
- Permanent higher joint quality by continuous rotation of the square drive.

ADVANTAGES

- Ergonomic design: Ultra grippy housing for your safety and a secure bolting procedure.
- OLED-display: Anti-glare and high contrast – for perfect reading under all weather conditions.
- High quality bolting: The brushless synchronous motor with excellent efficiency and the smart processor-controlled automatic shutdown ensures amazing increased productivity and low running costs.
- Low noise emissions, no noise protection necessary.
- Alkitronic smart service: Enabling wireless documentation and information.
- Unique 1-finger trigger: Unbeatable efficiency through fast, simple change of direction of rotation.
- Maximum flexibility: Thanks to the application-specific, modular software packages from Alkitronic - e.g. bolting according to the torque/rotation angle method with adjustable min./max. torque limitation. Can also be retrofitted later if the bolting application changes.
- Repeat shut-off accuracy $\pm 3\%$ for the same bolting application. Alkitronic Specials
- Simple navigation: Intuitive interface drastically reduces operating errors and misadjustments.
- Health and safety first: Due to a new technology patented by Alkitronic the reaction torques are decoupled. This leads to an extreme reduction of radial forces on the wrist to 1 Nm and thus actively contributes to the occupational health and safety of the worker.
- Outstanding battery concept: Vast increase in operating time thanks to innovative switching from 4 to 6 Ah.

TECHNICAL DATA

Bolting programs:

The software suite 1 is pre-installed in the basic equipment. For user-specific applications, the manufacturer can activate optional modular software:

Software suite 1: Torque controlled bolting (standard)

Software suite 2: Torque/angle procedure for high-quality bolting connections

Premium: Torque/angle procedure with adjustable min./max. torque limitation

Software suite 3: Bolting with preset rotations and torque limit

Software suite 4: Bolting parameters according to individual customer requirements

Software suite 5: Bluetooth transmission via Alkitronic APP

Documentation of the bolted joints
(target-actual status, recording for each joint)

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EB-S



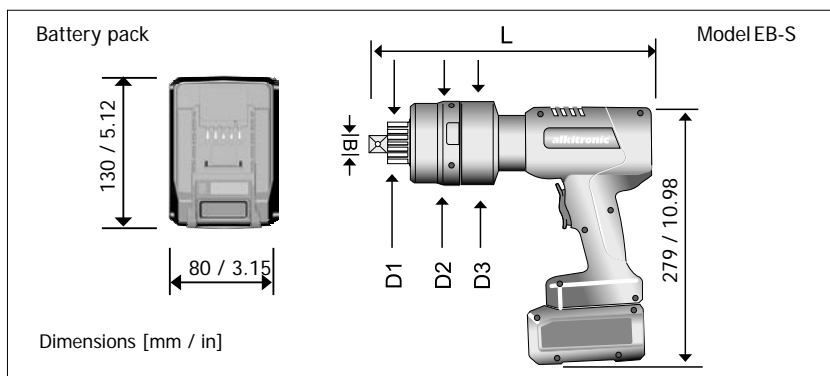
NEW EB-S 2HO

The two-hand control design (requiring both hands on the tool to start) enhances operator safety and helps prevent accidental starts or operator injury, particularly in high-torque applications. Contact your Specialised Force representative for more information.



SPECIFICATIONS

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Alkitronic DMA
Topology-optimised construction: very light and yet stable



MODELS EB-S

Type	EB-S 80	EB-S 150	EB-S 180	EB-S 250	EB-S 350	EB-S 400	EB-S 480	EB-S 600
Torque ranges (approx.)* Nm	110-850	150-1400	250-1800	350-2500	480-3500	560-4000	650-4800	800-6000
ft.lbs	90-620	110-1030	190-1330	260-1840	360-2580	410-2950	480-3540	590-4420
Square drive B	3/4 "	3/4 "	1 "	1 "	1 "	1 "	1 1/2 "	1 1/2 "
Diameter (approx.) D1 mm	41	41	54	54	54	54	72	72
Diameter (approx.) D2 mm	88	88	88	88	88	88	98	109
Diameter (approx.) D3 mm	88	88	88	88	88	88	88	88
Length (approx.) L mm	330	330	375	382	382	382	400	407
Weight without DMA** (approx.) kg	5.3	5.3	6.7	7.3	7.3	7.3	9.	10.5

*) When loosening bolts, a higher torque (up to 50 %) may be necessary (release torque). **) Torque reaction arm. We will be pleased to help you with your choice.

Scope of delivery in the machine case



Display views

Software suite 1 (mode 1) and software suite 2 (mode 2)

Mode 1 / M1 (Standard)



Bolting via torque.
Automatic release according to
pre-set angle degrees.

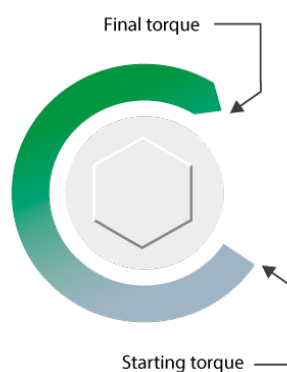
Mode 2 / M2 (Option)



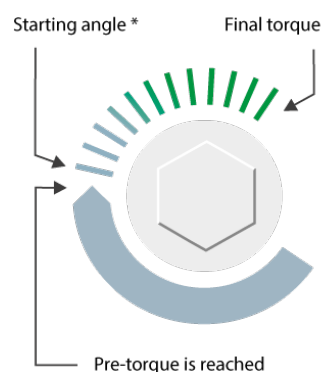
Torque/angle procedure for
high-quality bolting connections.
Display example of pre-torque,
angle and release angle.

Scheme bolting programs Mode 1 und Mode 2

Torque controlled bolting mode 1



Torque/angle procedure mode 2



During the bolting process, the current torque value is shown in the display. Reaching the set value is indicated by an "OK". If the selected value cannot be achieved, the bolting operation is evaluated as "nOK".

* Information on rotational angle setting for torque/angle method.
• The angle of rotation is specified by the design for the bolting connection.
• The angle of rotation can be determined individually and easily with alkitronic® HSD. We will gladly provide you with detailed product information.

EXCLUSIVE PACKAGE SOLUTION FOR DAF ENGINES

alkitronic®

OVERVIEW

Specialised Force now offers an exclusive solution for **DAF** engines. This comprehensive package includes everything you need — the Alkitronic EB series battery torque wrench, software suite, reaction arm and nut socket — all conveniently bundled to save you time and money. Don't wait! Contact one of our friendly representatives to place your order today.



(Art.no. 43900) CONSIST OF

Image	Qty.	Art. No.	Description	Additional Info.
	1x	EB-S 150	Alkitronic EB-S 150 150 - 1,400 Nm	N/A
	1x	21390	Software Suite 2 For torque/angle procedure	N/A
	1x	11411	Sliding support square	<ul style="list-style-type: none"> • 1x Sliding support square • Square Drive: 3/4" • Inner diameter reaction device: 41 mm • Reaction arm range: 75 mm - 200 mm
	2x	31624	Staco Nut	<ul style="list-style-type: none"> • Square Drive: 3/4" • AF: 24 mm • Length: 50 mm

EXCLUSIVE PACKAGE SOLUTION FOR MAN ENGINES

alkitronic®

OVERVIEW

Specialised Force now offers an exclusive solution for **MAN** engines. This comprehensive package includes everything you need — the Alkitronic EB series battery torque wrench, software suite, reaction arm and nut socket — all conveniently bundled to save you time and money. Don't wait! Contact one of our friendly representatives to place your order today.



(Art.no. 43901) CONSIST OF

Image	Qty.	Art. No.	Description	Additional Info.
	1x	EB-S 150	Alkitronic EB-S 150 150 - 1,400 Nm	N/A
	1x	21390	Software Suite 2 For torque/angle procedure	N/A
	1x	11520	Sliding support square	<ul style="list-style-type: none"> • Square Drive: 3/4" • Inner diameter reaction device: 41 mm • Reaction arm range: 75 mm - 200 mm
	2x	32512	Staco Nut	<ul style="list-style-type: none"> • Square Drive: 3/4" • AF: 24 mm • Length: 90 mm

EB-N & PC-N SERIES

APPLICATIONS

Alkitronic **N-Tool** torque multipliers facilitate and speed up wheel changes on transport vehicles with torques up to 3,500 Nm. For example, on dump trucks with deep-bed rims in open-cast mining or on buses and lorries.

ADVANTAGES

- Economic, safe operation. No weather-related costly downtime.
- Permanently higher joint quality (compared to impact and hydraulic wrenches) by continuous rotation of the square drive.
- Comfortable, stress-free working. The motor unit can be rotated 360 degrees. One handed operation with CW/CCW.

PC-N, pneumatic driven Models:

- Heavy duty, rugged housing made of cast aluminum.
- Ideal for use in explosion-proof working environment.
- World proven reliable pneumatic drive motor.

EB-N, Li-Ion battery models with release function:

- Ergonomic design and high quality materials: Ultra grippy and nonslip housing, break-proof and corrosion-resistant. Compact and secure mounting of electric motor and gearbox in aluminium profile housing.
- High quality bolting: The brushless synchronous motor with excellent efficiency and the smart processor-controlled automatic shutdown ensures amazing increased productivity and low running costs.
- Alkitronic Smart Service - perfect documentation of the bolting cases.
- Maximum flexibility: thanks to optional application-specific, modular software packages.
- Repeat shut-off accuracy $\pm 3\%$ for the same bolting application.
- OLED-display: Anti-glare and high contrast – for perfect reading under all weather conditions.

ALKITRONIC SPECIALS

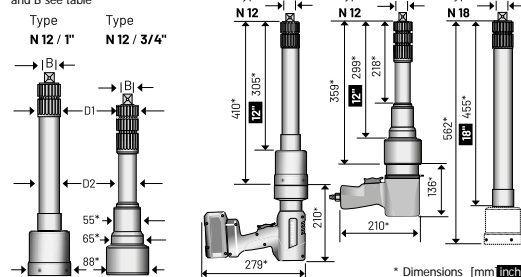
Models EB-N: Two battery packs included.

Models PC-N: ATEX approval on request.

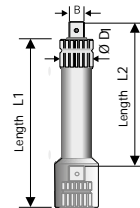
MEASUREMENTS

N-Tools Dimensions

Dimensions Diameter -D1, D2 and B see table



ATV Square drive extension



Dimensions see table

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Alkitronic ATV
Square drive extension



SPECIFICATIONS

Drive	electric (battery)			pneumatic **			ATV Square drive extension				
Model N-Tool (-N)	EB-S 150-	EB-S 250-	EB-S 350-	PC-S 125-	PC-S 225-	PC-S 280-	Square drive	Ø D1	Length L1	Length L2	Order-No.
Type (Length „N“ extension)	N12	N12 or N18	N12 or N18	N12	N12 or N18	N12 or N18	B	mm	mm/in	mm/in	
Torque range* Nm	150-1400	350-2500	480-3500	495-1450	900-2670	1180-3460	3/4"	41	260 / 10.2"	229 / 9"	10310
Square drive B	3/4"	1"	1"	3/4"	1"	1"	3/4"	41	336 / 13.2"	305 / 12"	10313
Diameter (approx.) D1 mm	41	54	54	41	54	54	1"	54	267 / 10.5"	229 / 9"	10278
Diameter (approx.) D2 mm	38	48	48	38	48	48	1"	54	343 / 13.5"	305 / 12"	10279

Examples of model designations: EB-S 150-N12, EB-S 250-N18, PC-S 125-N12

*) When loosening bolts, a higher torque (up to 20 %) may be necessary (release torque). We will gladly advise you in detail.

**) Prerequisites for best work with the indicated torques are an operating pressure of 2-7 bar at a volume flow of approx. 10-15 l/s. The torque accuracy depends on the stability of the supply system.

PV-F SERIES

APPLICATIONS

- Pneumatic torque multipliers for torques up to 3,460 Nm.
- Multiple fastening connections and series assembly in semi-automatic operations.
- Perfect for bolted applications in hazardous, explosive environments.

ADVANTAGES

- Permanently higher joint quality (compared to impact and hydraulic wrenches) by continuous rotation of the square drive.
- Concurrent, even bolted connection, crosswise with several Alkitronic PV-F torque multipliers.
- Comfortable remote control for right-left rotation.
- Low noise emission by integrated muffling.

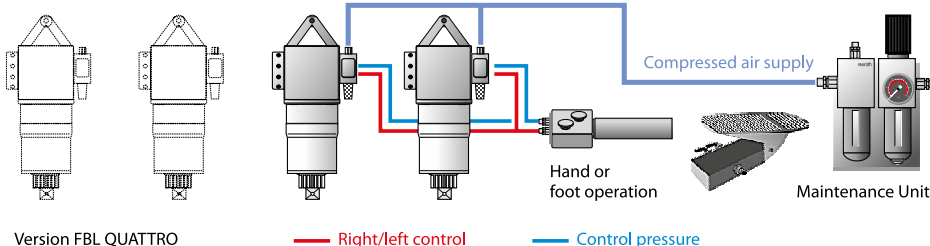
ALKITRONIC SPECIALS

- Universal valve block for pneumatic steering according to specific requirements.
- Robust pneumatic drive with sophisticated high-performance gear, reliably used around the world.
- Alkitronic PV-F remote systems for one to four PV-F torque multipliers.
- Alkitronic exhaust system for a workplace without air swirls (optional).

alkitronic® PV-F Remote Systems

Chart:
FBL DUO for two PV-F torque multipliers

The FBL QUATTRO version for four PV-F torque multipliers more details on request.



SPECIFICATIONS

Type	PV-F 15	PV-F 25	PV-F 35	PV-F 45	PV-F 75	PV-F 95	PV-F 135	PV-F 175	PV-F 255	PV-F 315
(formerly)	CLV 15	CLV 25	CLV 35	CLV 45	CLV 75	CLV 95	CLV 135	CLV 175	CLV 255	CLV 315
Torque range (approx.)* Nm	60-220	90-280	130-400	160-500	300-900	360-1100	490-1450	650-1900	900-2700	1200-3500
Square drive B	1/2" / 3/4"	1/2" / 3/4"	3/4"	3/4"	3/4"	3/4"	1"	1"	1"	1"
Diameter (approx.) D1 mm	41	41	41	41	41	41	54	54	54	54
Height (approx.) L mm	296	296	296	296	318	318	320	340	372	372
Weight without DMA (approx.) kg	5.5	5.5	6	6	6.5	6.5	6.5	6.5	7	7
Idle speed rpm	60	38	34	27	19	13	9	7	6	4

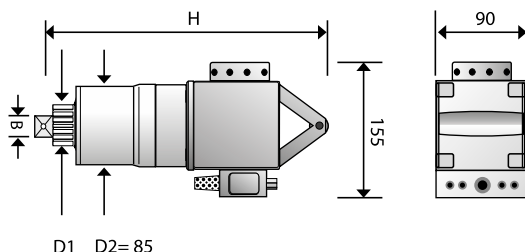
* When loosening a bolted connection, up to 20% higher torque may be required (loosening torque). We will gladly advise you in detail.

ACCESSORIES

Maintenance Unit, complete with filter, regulator, oiler and 5 m hose, incl. couplings. Prerequisites for best work with the indicated torques are an operating pressure of 2-7 bar at a volume flow of approx. 10-15 l/s. The torque accuracy depends on the stability of the supply system. The torque control of the pneumatic Alkitronic torque multiplier takes place via the air supply or pressure regulator of the Maintenance Unit.



DIMENSIONS



Alkitronic PV-F operating in a preassembly and final assembly workstation. Remote controlled continuous tightening in semi-automatic operation.

PC SERIES

APPLICATIONS

- Continuous rotation, tightening, or loosening for all heavy duty fastening connections.
- Perfect for bolted applications in hazardous, explosive environments.
- Alkitronic PC-F quick, compact torque multiplier for torques of 55 to 2,555 ft.lbs (75 to 3,460 Nm).
- Alkitronic PC-S comfortable torque multiplier with rotating handle for torques of 225 to 7,225 ft.lbs (305 to 9,795 Nm).
- Alkitronic PC-F2 high-performance 2-gear machine for torques of 90 to 35,855 ft.lbs (120 to 48,610 Nm).

ADVANTAGES

- Permanently higher joint quality (compared to impact and hydraulic wrenches) by continuous rotation of the square drive.
- Alkitronic PC-S - the 360 degree rotating handle ensures comfortable operation. Barely any reaction forces are transferred to the user.
- Alkitronic PC-F2 with fast gear for turning in and simple, quick switching to power gear (is used for applying the final torque).

ALKITRONIC SPECIALS

- Simple 1-finger operation for right/left rotation, option to enable the reaction to be locked in one position.
- Robust cast aluminum housing with proven pneumatic drive.
- Proven high-performance gears, produced in a chip-free, highprecision process produce high loads with low wear.
- Alkitronic PC-F2 with uniquely high torque - 35,855 ft.lbs. (48,610 Nm).
- Optional silencer levels to reduce the noise from the motor exhaust on request.

TECHNICAL DATA

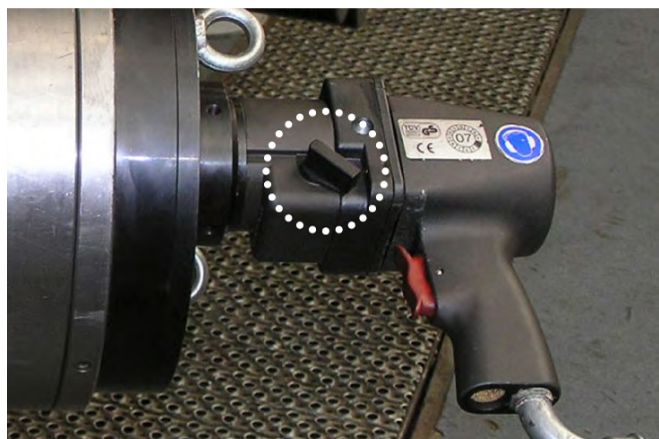
On request, you will receive our pneumatic multipliers with ATEX Certification.

Prerequisites for best work with the indicated torques are an operating pressure of 29-10,000psi (2-7 bar) at a volume flow of approx. 122-915 cu.in./min. The torque accuracy depends on the stability of the supply system.

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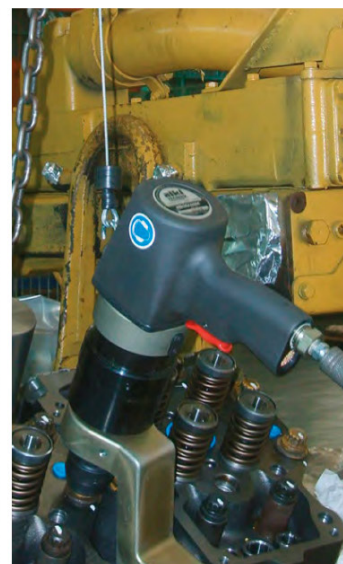


PC-F



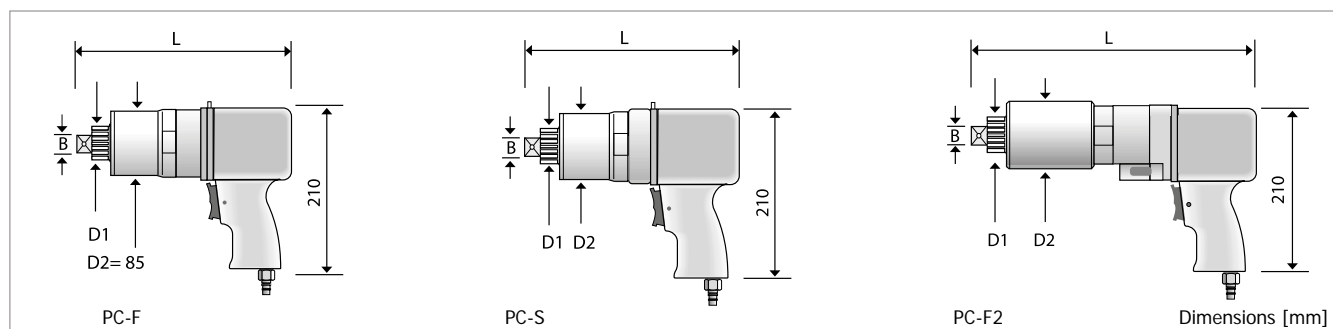
Alkitronic PC-F2, 2-gear pneumatic torque multiplier. Mechanically switchable from fast gear to power gear.

Alkitronic PC-S torque multipliers in use (figures on the right). Screw connections at a bolt circle and a diesel unit for large construction machines



SPECIFICATIONS

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MODELS PC-F

Type	PC-F 15	PC-F 25	PC-F 35	PC-F 45	PC-F 75	PC-F 95	PC-F 135	PC-F 175	PC-F 255	PC-F 315
(formerly)	CLS 15	CLS 25	CLS 35	CLS 45	CLS 75	CLS 95	CLS 135	CLS 175	CLS 255	CLS 315
Torque range (approx.)* Nm	75-225	95-280	135-390	165-485	305-895	365-1080	495-1450	645-1900	910-2670	1180-3460
Square drive B	1/2" / 3/4"	1/2" / 3/4"	3/4"	3/4"	3/4"	3/4"	1"	1"	1"	1"
Diameter (approx.) D1 mm	41	41	41	41	41	41	54	54	54	54
Length (approx.) L mm	255	255	255	255	277	277	300	300	330	330
Weight without DMA (approx) kg	6	6	6	6	7	7	8	8	8.5	8.5
Idle speed rpm	60	38	34	27	19	13	9	7	6	4

MODELS PC-S

Type	PC-S 85	PC-S 105	PC-S 125	PC-S 175	PC-S 225	PC-S 280	PC-S 380	PC-S 580	PC-S 780	PC-S 980
(formerly)	CLD 85	CLD 105	CLD 125	CLD 175	CLD 225	CLD 280	CLD 380	CLD 580	CLD 780	CLD 980
Torque range (approx.) *Nm	305-895	365-1080	495-1450	645-1900	910-2670	1180-3460	1490-4380	2080-6115	2610-7675	3330-9795
Square drive B	3/4"	3/4"	3/4"	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Diameter (approx.) D1 mm	41	41	41	54	54	54	72	72	72	91
Diameter (approx.) D2 mm	85	85	85	85	85	85	98	109	133	173
Length (approx.) L mm	275	275	275	300	300	300	320	350	350	370
Weight without DMA (approx.) kg	7	7	7	7	8.5	8.5	10.5	13	15	25
Idle speed rpm	19	13	9	7	5	4	3	2	1.5	1

MODELS PC-F2

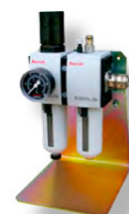
Type	PC-F2/100	PC-F2/150	PC-F2/300	PC-F2/400	PC-F2/600	PC-F2/800	PC-F2/1000	PC-F2/3400	PC-F2/4800
(formerly)	CLS2100	CLS2150	CLS2300	CLS2400	CLS2600	CLS2800	CLS21000	CLS23400	CLS24800
Torque range 2nd gear (approx.) *Nm	120-355	170-505	385-1130	540-1585	840-2470	1010-2965	1175-3455	3310-9720	4725-13890
Torque range 1st gear (approx.) *Nm	380-1125	550-1615	1225-3595	1720-5055	2675-7865	3210-9435	3745-11010	11575-34025	16540-48610
Square drive B	3/4"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2 1/2"	2 1/2"
Diameter (approx.) D1 mm	41	54	54	72	72	72	91	TBA	TBA
Diameter (approx.) D2 mm	85	85	85	98	109	133	173	TBA	TBA
Length (approx.) L mm	330	330	360	380	410	410	430	TBA	TBA
Weight without DMA (approx.) kg	7	7.5	9	11	12	16	24	58	58
Idle speed 2nd gear rpm	36	21	15	9	6	5	4	TBA	TBA
Idle speed 1st gear rpm	12	7	5	3	2	1.5	1	TBA	TBA

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

ACCESSORIES

Maintenance Unit, complete with filter, regulator, oiler and 5 m hose, incl. couplings.

Prerequisites for best work with the indicated torques are an operating pressure of 2-7 bar at a volume flow of approx. 10-15 l/s. The torque accuracy depends on the stability of the supply system. The torque control of the pneumatic Alkitronic torque multiplier takes place via the air supply or pressure regulator of the Maintenance Unit.



PC-R & PC-SG SERIES

APPLICATIONS

- These tools are ideally specialised for bolting connections on plate heat exchangers, e.g. in the food and beverage sector, the paper industry and the chemical industry. They save much time when tightening and loosening plate packs where perfect retention and absolute tightness are essential.
- Reliable, low-wear operation due to continuous rotation when bolting with spindles or long threaded bolts.
- Depending on the application, electrical or pneumatic driven torque multipliers: torque up to 4,840 Nm

ADVANTAGES

- Load-free operation, with short assembly time.
- Alkitronic PC-R, PC-SG and battery driven torque multiplier EAF with fast gear for turning in and simple, quick switching to power gear.
- SG output can be separated; the respective drive can be used individually as a complete torque multiplier.

ALKITRONIC SPECIALS

- Targeted types for convenient working in every tightening situation: among other options between radial gearing (R) with high-performance worm drive; tangential gearing (SG) with highly efficient spur gear.
- Long lifetime due to extremely robust motor housing made of cast aluminum or break-proof polymer.
- Supplied in sturdy plastic cases.
- Successfully used worldwide by manufacturers, service companies and end customers for over 35 years.

TECHNICAL DATA

Pneumatic driven models

- Prerequisites for best work with the indicated torques are an operating pressure of 2-7 bar at a volume flow of approx. 10-15 l/s. On request, our pneumatic torque multipliers are available with ATEX certification: II 2 G D c IIB T6.

Electric driven models:

- Universal AC input 100 V – 253 V, frequency 45 Hz – 66 Hz, power max. 1.4 kW, protection category I. EC models with protection class IP54. EAF models with two lithium-ion battery packs 18 V, 5.2 Ah and battery charger.

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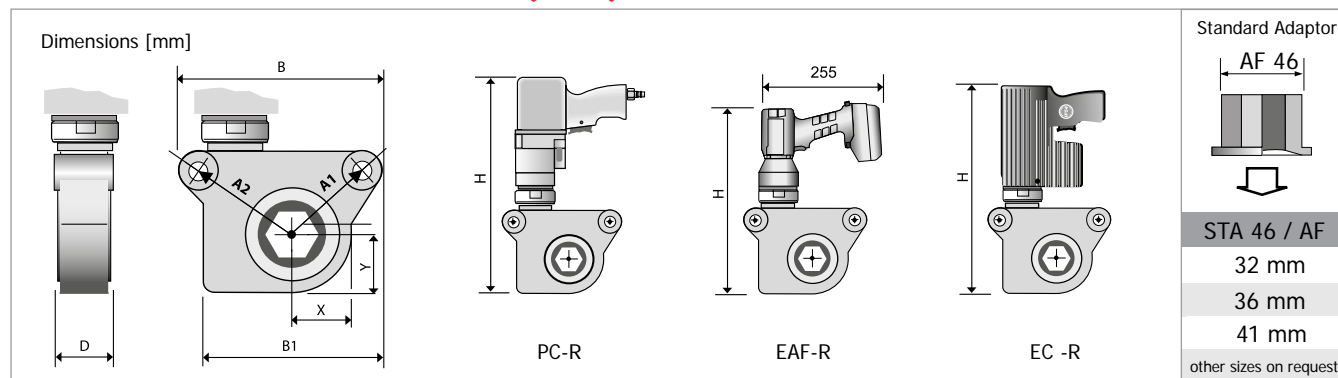
RADIAL & TANGENTIAL GEARING EXAMPLE APPLICATIONS

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SPECIFICATIONS

ALKITRONIC RADIAL GEARING (R 46)

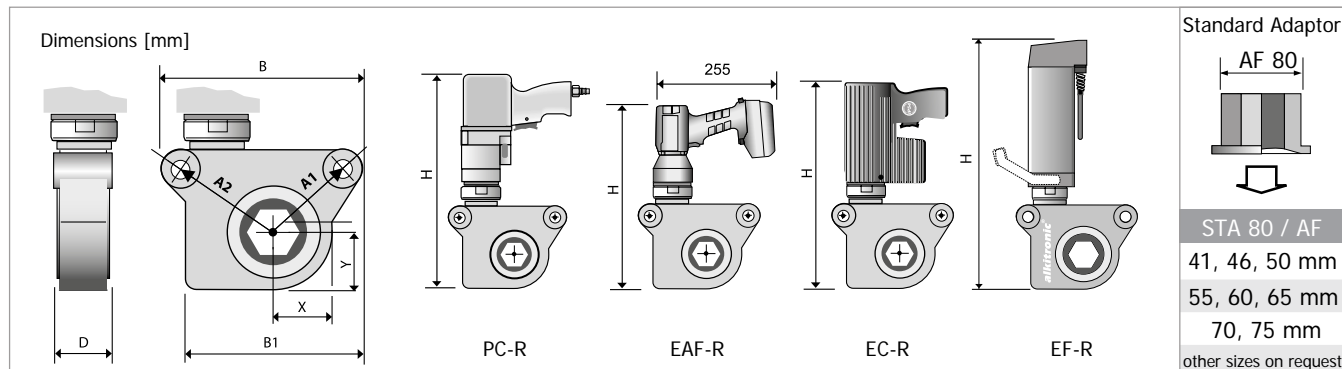


Radial Gearing Models	Pneumatic drive		Electric drive	
	PC-R (2-Gear)	EAF-R (2-Gear)	EC-R	
Type (formerly)	PC-R 46 RCL2 46	EAF-R 46 -	EC-R 46 -	
Torque range 2nd gear (approx.) Nm	250-780	250-730	-	
Torque range 1st gear (approx.) Nm	800-2500	750-2500	250-2530	
Width across flat (AF) mm	46	46	46	
Height (approx.) H mm	435	400	425	
Width (approx.) B/B1 mm	252/215	252/215	252/215	
Bolt distance (approx.) A1/A2 mm	112/145	112/145	112/145	
Dimensions (approx.) X/Y mm	75/75	75/75	75/75	
Dimension (approx.) D mm	94	94	94	
Weight (approx.) kg	13.5	13.5	14.5	
Idle speed 1st gear (approx.) rpm	4.5	2.5	9.5	
Idle speed 2nd gear (approx.) rpm	14	8	-	

SPECIFICATIONS

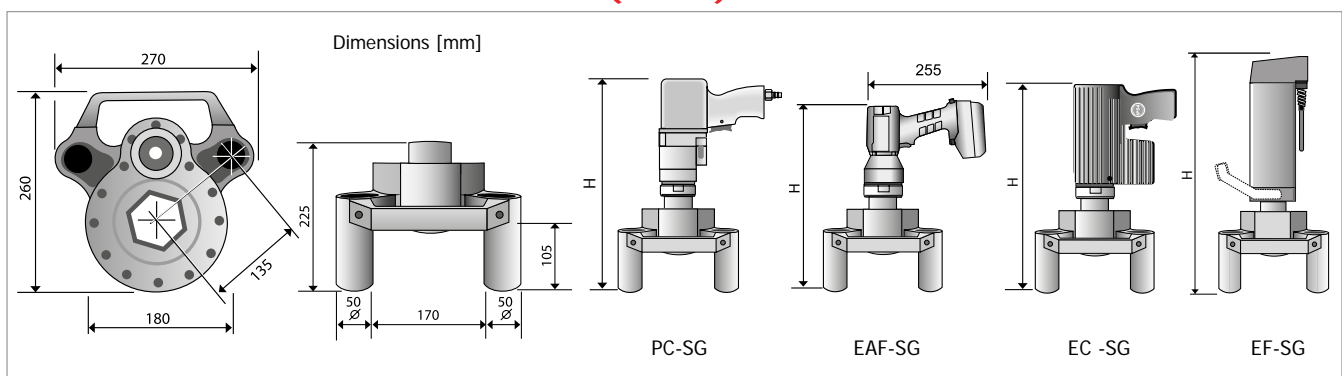
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ALKITRONIC RADIAL GEARING (R 80)



Radial Gearing Models	Pneumatic drive		Electric drive	
	PC-R (2-Gear)	EAF-R (2-Gear)	EC-R	EF-R
Type	PC-R 80	EAF-R 80	EC-R 80	EF-R 80
(formerly)	RCL2 80	-	-	-
Torque range 2nd gear (approx.) Nm	670-1975	250-730	-	-
Torque range 1st gear (approx.) Nm	1645-4840	750-2500	480-3840	560-3780
Width across flat (AF) mm	80	80	80	80
Height (approx.) H mm	450	450	475	600
Width (approx.) B/B1 mm	325/240	325/240	325/240	325/240
Bolt distance (approx.) A1/A2 mm	156/194	156/194	156/194	156/194
Dimensions (approx.) X/Y mm	98/98	98/98	98/98	98/98
Dimension (approx.) D mm	94	94	94	94
Weight (approx.) kg	21	24.5	21	24.5
Idle speed 1st gear (approx.) rpm	4	2	9.5	9
Idle speed 2nd gear (approx.) rpm	12	7	-	-

ALKITRONIC TANGENTIAL GEARING (SG 80)



Tangential Gearing Models	Pneumatic drive		Electric drive	
	PC-SG (2-Gear)	EAF-SG (2-Gear)	EC-SG	EF-SG
Type	PC-SG 80	EAF-SG 80	EC-SG 80	EF-SG 80
(formerly)	CLS2-SG 80	-	-	-
Torque range 2nd gear (approx.) Nm	450-1330	600-1500	-	-
Torque range 1st gear (approx.) Nm	1440-4235	1000-3700	370-3480	560-3780
Width across flat (AF) mm	80	80	80	80
Height (approx.) H mm	530	470	500	635
Weight (approx.) kg	17	16,2	19	22
Idle speed 1st gear (approx.) rpm	3.5	1,7	10	10
Idle speed 2nd gear (approx.) rpm	10	6,0	-	-

M-HG SERIES (WITH RATCHET)

APPLICATIONS

- Alkitronic M-HG 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-HG 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

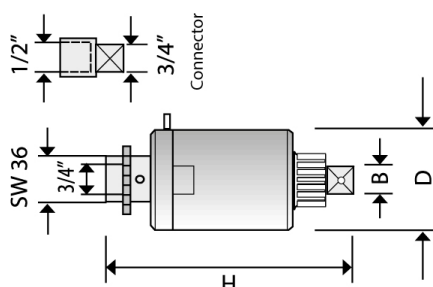
- Torque Multiplier input via: 3/4" internal square socket torque wrench or conventional ratchets external hexagonal socket SW 36 mm.
- Handwheel - for rough turning loose bolts/nuts.
- Alkitronic manual torque multipliers are supplied with a support foot (DMA) as standard version. For support rings, back stops, ratchets, torque wrenches and other components, please see our Alkitronic catalog of accessories.

SPECIFICATIONS

Type	M-HG10	M-HG15	M-HG20	M-HG30	M-HG40	M-HG50	M-HG60	M-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.

DIMENSIONS



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.

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TORQUE WRENCHES & MULTIPLIERS

specialisedforce.com.au

M-SD/PC-SD SERIES

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 M-SD and the pneumatic operated Alkitronic PC-SD. 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 ft.lbs.

Alkitronic M-SD

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

Alkitronic PC-SD

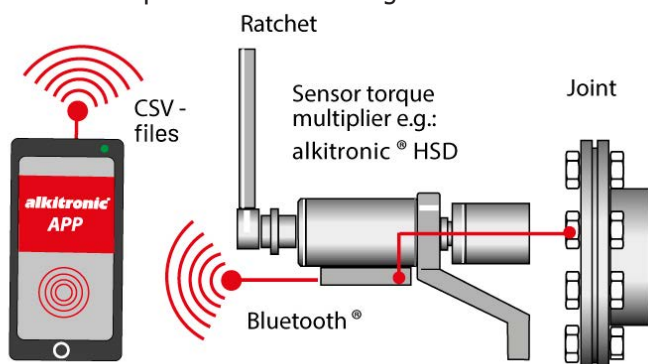
- Robust motor housing of cast aluminum with proven pneumatic drive.
- Proven high-performance gears, produced in a chip-free, highprecision process produce high loads with low wear.
- Simple 1-finger operation for right/left rotation.

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.



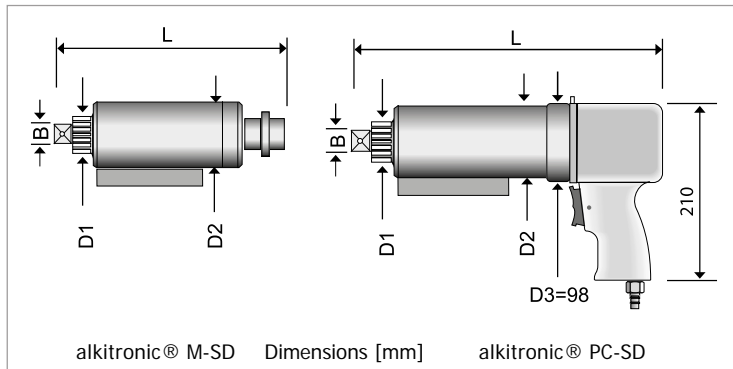
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M-SD/PC-SD SERIES INTEGRATED TORQUE SENSOR

alkitronic®

SPECIFICATIONS



Type (formerly)	Pneumatic drive					
	M-SD 100	M-SD 200	M-SD 400	PC-SD 100	PC-SD 200	PC-SD 400
Measuring range approx. Nm	100-1000	200-2000	400-4000	100-1000	200-2000	400-4000
Power (max) Nm	1000	2000	4000	1000	2000	4000
Square drive B	1"	1"	1 1/2"	1"	1"	1 1/2"
Diameter (approx.) D1 mm	54	54	72	54	54	72
Diameter (approx.) D2 mm	88	88	98	88	88	98
Length (approx.) L mm	220	295	320	360	390	410
Weight without DMA approx. kg	6.4	7.6	11.35	10	11.25	15
Idle speed r/min	-	-	-	11	5	3.5

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

OVERVIEW OF THE PROGRAMS 1 TO 5 (PROGRAMS FOR M-SD: 1-4, FOR PC-SD: 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 PC-SD**
 - Display and recording of the actual torque.

Operating range M-SD / PC-SD with OLED graphic display

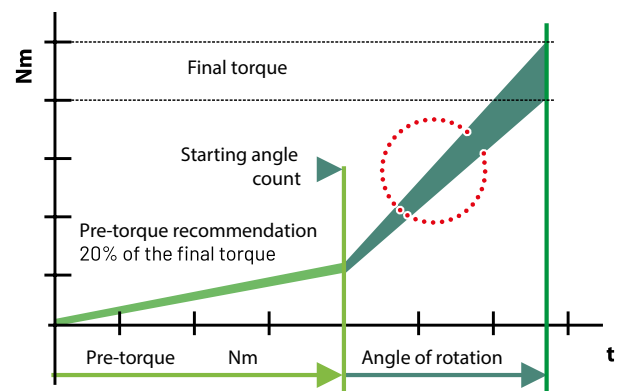
Diagram for program 2 and 4

Example for menu-guided operation (M-SD)



Examples Display image in mode "Program 1"

Select units (Nm/ft.lbs) 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.



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® M-SD.

XCE & X-ML SERIES

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.
- 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..

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.

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.



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

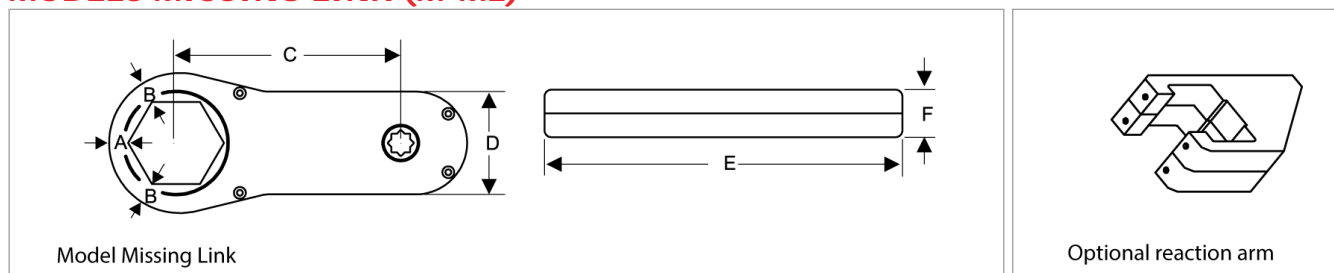


Missing Link™ - the manual torque multipliers are available with spanner sizes from 22 mm to max. 80 mm and ratios of 4:1, 6:1. The Missing Link™, the most suitable multiplier for every bolting connection.

SPECIFICATIONS

alkitronic®

MODELS MISSING LINK (M-ML)



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
A mm	13.5	12	11.1	12	11.1	11.1	11.1	11.1	11.1	11.1	11.1
B mm	15.1	13.5	12.7	13.5	12.7	12.7	12.7	12.7	12.7	12.7	12.7
E mm	222	222	222	226	226	228	231	234	236	239	242

C 151mm
D 70mm
F 32mm

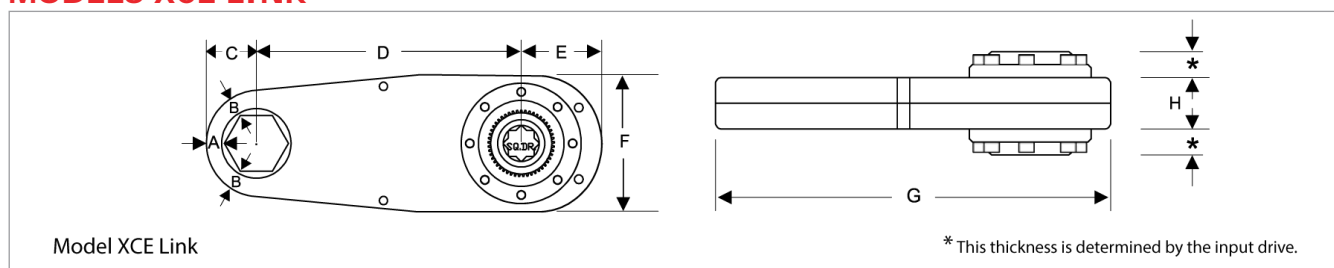
Models Missing Link M-ML - 3/4", 4:1 Ratio - max. 815 Nm input / 3260 Nm output															
SW	22	24	27	30	32	36	41	46	50	55	60	65	70	75	80
A mm	21.3	20.3	18.8	17.3	16.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
B mm	23.6	22.6	21.1	19.6	18.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6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

C 212mm
D 95mm
F 45mm

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
A mm	23.3	21.3	18.8	14.3	16.3	14.3	14.3	14.3	14.3
B mm	25.6	23.6	21.1	18.6	16.6	16.6	16.6	16.6	16.6
E mm	476	476	476	476	476	479	481	484	487

C 355mm
D 102mm
F 45mm

MODELS XCE LINK



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
A mm	10	11	11	12	12	13	13	14	14	15	15	16	16
B mm	11	11	12	12	13	13	14	14	15	15	16	16	17
C mm	25	27	30	33	36	40	42	46	49	53	56	59	63
G mm	241	243	246	249	252	256	258	262	265	269	272	275	279

D 156 mm
E 60 mm
F 102 mm
H 38mm

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
A mm	13	14	14	15	15	16	16	17	18	19	20	20	21
B mm	14	14	15	15	16	16	17	18	19	19	20	20	21
C mm	42	46	49	53	56	59	63	70	76	80	83	87	90
G mm	330	334	337	341	344	347	351	358	364	368	371	375	378

D 208 mm
E 80 mm
F 137 mm
H 51 mm

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
A mm	10	11	11	12	12	13	13	14	14	15	15	16	16
B mm	11	11	12	12	13	13	14	14	15	15	16	16	17
C mm	25	27	30	33	36	40	42	46	49	53	56	59	63
G mm	281	283	286	289	292	296	298	302	305	309	312	315	319

D 196 mm
E 60 mm
F 102 mm
H 38 mm

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
A mm	13	14	14	15	15	16	16	17	18	19	20	20	21
B mm	14	14	15	15	16	16	17	18	19	19	20	20	21
C mm	42	46	49	53	56	59	63	70	76	80	83	87	90
G mm	384	388	391	395	398	401	405	412	418	422	425	429	432

D 262 mm
E 80 mm
F 137 mm
H 51 mm

FLANGE BOY

APPLICATION AND ADVANTAGES

- Easy and safe mechanical separation of piping flanges.
- All parts manufactured with highest quality materials.
- FLANGE BOY is proven in international tests.

OPERATION INSTRUCTIONS

Insert the FLANGE BOY in one of the bolt holes of a flange. Slip the bolt support plate, which is held by a chain, between the flange facings underneath the setscrew. Once the FLANGE BOY is jammed tight, continue turning with a wrench until a position is reached where a gasket can be replaced or a spade set. Then, slacken back the setscrew to the point where the support plate can be removed and tap the setscrew with a hammer to free the FLANGE BOY from the bolt hole. Recommend the use of two FLANGE BOYS in cases where the transfer of very great force is required. Insert the second FLANGE BOY in the corresponding hole of the companion flange. The force, applied will act on the same support plate. You will, thus, be able to apply heavy loads without risking damage to the support plate. Due to the flange proportions, it is not possible to increase the thickness of the support plate.

Do not load a plate on side while using great force!

Grease the threads well before using!

Warning: To avoid serious injuries, never put your fingers between the separated flanges!

SPECIFICATIONS

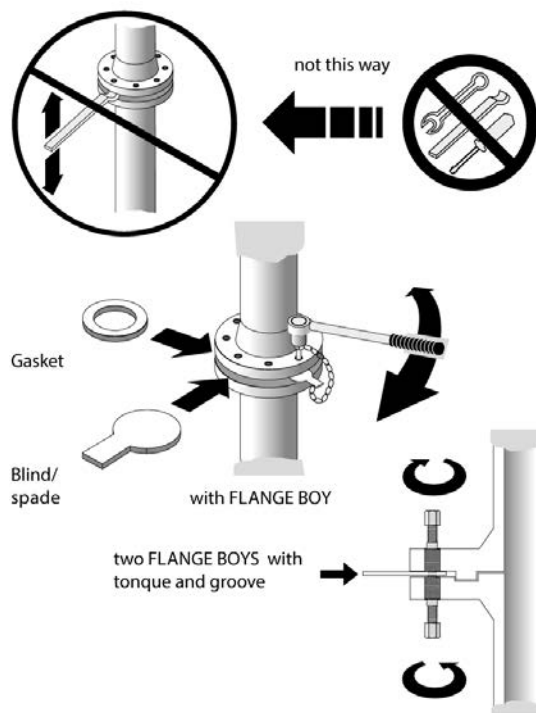
DIN Flange Dimensions (further sizes - upon request)

Type	Bolt hole (Ø mm)	PN 10 DN	PN 16 DN	PN 25 DN	PN 40 DN	PN 64 DN	PN 100 DN	PN 160 DN
D 18	18	32-125	32-125	32-80	32-80	20-25	20-25	20-25
D 22	22	150-350	150-200	100	100	32-80	32-40	32-40
D 26	26	400-500	250-300	125-200	125-150	100	50-80	50-80
D 30	30		400	250-350	200	125	100	100
D 33	33			350	250-300	150	150-175	125-150
D 36	36			400	350	200-300	200	200
D 39	39				400	350	250	
D 42	42					400	300	250-300

ANSI (ASA) Flange and British Standard Flange Dimensions (further sizes - upon request)

Type	Bolt hole (Ø mm)	150 lbs DN/Inch	300 lbs DN/Inch	600 lbs DN/Inch	900 lbs DN/Inch	1500 lbs DN/Inch
A 3/4	19	2, 2½, 3, 4	¾, 1, 2	¾, 1, 1¼, 2		
A 7/8	22	5, 6, 8	1, 1½, 2½, 3, 4, 6	1½, 2½, 3	½, ¾	½, ¾
A 1	25	10, 12	8	4	1, 2, 3	1, 2
A 1 1/8	28	14, 16	10	6	1½, 2½	1½, 2½
A 1 1/4	32	18, 20	12, 14	8	4, 6	3
A 1 3/8	35	24	16, 18, 20	10, 12		4
A 1 1/2	38		14	8, 10, 12	6	
A 1 5/8	41		24	16	14	

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Indispensable for separation of piping for
DIN, ANSI (ASA) and B. Std. Flanges



DBP Nr. 2522817 • US Patent No. 4015324

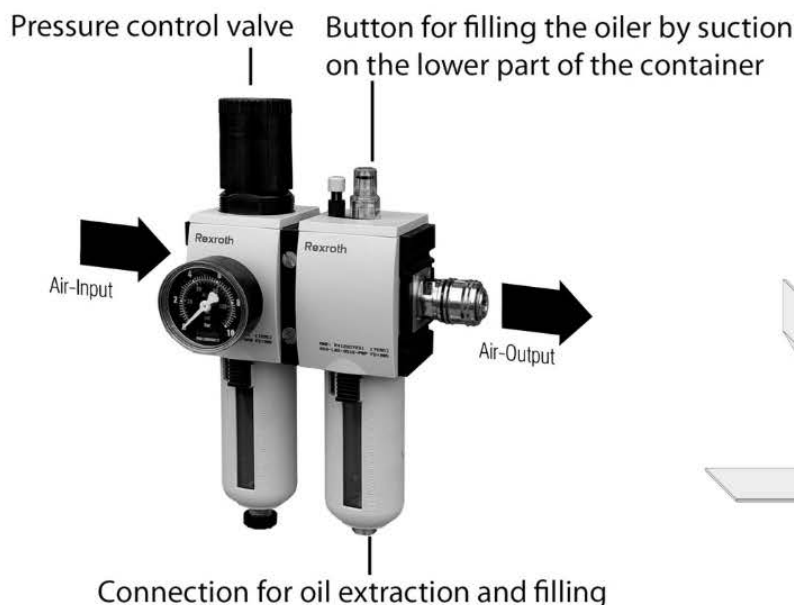
ALKITRONIC 20350F MAINTENANCE UNIT

alkitronic®

APPLICATION AND ADVANTAGES

Alkitronic pneumatic torque wrenches have adjustable torque which can be controlled by varying the input air pressure to the tool. The more accurately the air pressure is controlled the more accurate the tool output torque.

20350F Maintenance Unit is supplied with a metal stand, high quality Rexroth Filter Regulator-lubricator, 5 metre long air hose for connection between maintenance unit and tool via Cejn quick disconnect airline couplings. Filled with special oil and gauge shows PSI and bar.



Art. No. 20350 - Maintenance unit complete including 5 m hose, bracket and special oil



TORQUE WRENCHES & MULTIPLIERS

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OZITO BATTERY KIT TO SUIT ALKITRONIC EB SERIES

alkitronic®

Model No.	13176	131175
Description	Ozito 18V Battery 5.2Ah	Ozito 230V Charger



METABO BATTERY KIT TO SUIT ALKITRONIC EAF SERIES

Model No.	13102	13103
Description	Metabo 18V Battery 5.2Ah	Metabo 230V Charger



ALKITRONIC DMA

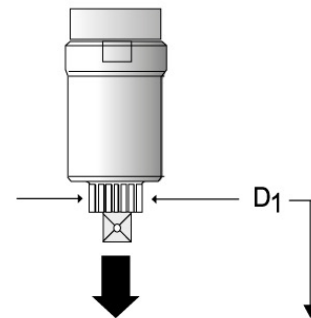
REACTION DEVICES



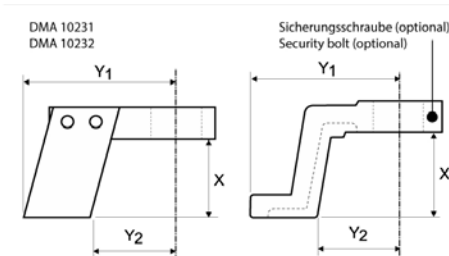
DMA 10241



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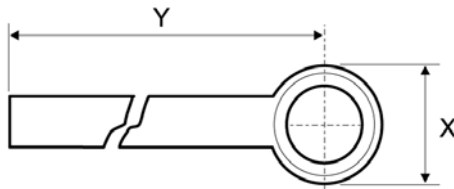


REACTION FOOT



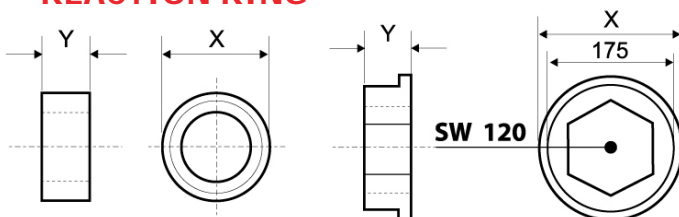
Square drive	mm D1	mm X	mm Y ₁	mm Y ₂	Nm max. MD	DMA No.
3/4"	41	61	120	69	1500	10231
3/4"	41	98	130	79	1500	10232
3/4"	41	65	130	50	1500	10241
1"	54	83	150	55	4000	10243
1", 1 1/2"	72	85	194	110	5000	10234
1 1/2"	72	120	212	116	8500	10256
1 1/2"	91	123	215	120	11500	10257

TOWARD SUPPORT



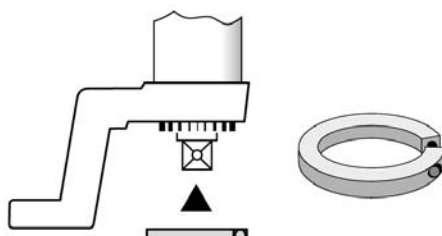
	D ₁	X	Y	DMA No.
3/4"	41	65	240	10261
1"	54	80	240	10262
1 1/2"	72	105	240	10265
1 1/2"	91	105	240	10267

REACTION RING



	D ₁	X	Y	DMA No.
3/4"	41	65	28	10246
1"	54	80	28	10247
1 1/2"	72	110	33	10248
1 1/2"	72	110	47	10249
1 1/2"	91	130	52	10250
2 1/2"	SW 120	180	57	10416

SECURITY RING



D ₁	DMAR No.
41	10271
54	10272
72	10275
91	10277

TORQUE MULTIPLIERS APPLICATIONS OVERVIEW

alkitronic®


Since 1991, Specialised Force, as the authorised distributor of Alkitronic in Australia, has witnessed how Alkitronic has become a globally trusted partner, chosen by leading international industry leaders. With extensive experience in delivering high-precision bolting solutions, Alkitronic serves many sectors, including renewable energy (such as wind energy), steel and crane construction, heavy mobile equipment, mining, agriculture, water, oil & gas, chemicals, and food & beverage.

Alkitronic tools meet the toughest demands:

- Weather-proof precision for wind turbines
- Permanent strain resistance in steel structures
- High-torque, high-speed performance for cranes and heavy equipment
- Rugged durability for mining operations
- Fast, accurate operation in agriculture
- Cost-efficient reliability for refineries and chemical plants
- Time-saving precision in food and beverage processing

From maintaining tower bolts and replacing gearboxes in wind turbines, to assembling stadiums, dismantling cranes, servicing mining trucks, tightening flange connections, and repairing plate heat exchangers—Alkitronic solutions ensure safety, speed, and absolute reliability in every environment.

In this application overview, Specialised Force will open the curtain on how Alkitronic solutions can help you—no matter which industry you are in. Below, we have listed the products with brief descriptions of their use in featured applications:



Manual Torque Multipliers: HG & Missing Link

For pitch systems on rotor blades. Manual Alkitronic® torque multipliers replace impact spanners, pipe extensions, and other inadequate, accident-prone screwing methods. No annoying cables—ideal for maintenance work. Torque range: 200–50,000 Nm.



MDS – Torque Detection Systems

Measures torque directly at the bolt. Transmits predefined bolting parameters to the tool, records current bolt joint values, and creates bolting processes with complex parameters. Provides monitoring with graphic display, plus retrieval and archiving of logs. Suitable for electric systems (including torque-angle rotation method for electric tools).



Electric Torque Multipliers: EC & EF

Alkitronic® electric torque multipliers deliver quick, safe, and precise bolting. Automatic shut-off occurs after reaching the preset torque. Accuracy remains consistent across all international power grids (110V–253V / 45–66 Hz). Angled versions are available for confined spaces.



Battery-Driven Torque Multipliers: EB & EAF

Mobile, flexible, and precise bolting solutions with long-lasting, fast-charging batteries. Motor housing is made from a special polymer—break-proof, impact-resistant, and corrosion-resistant—for minimal damage risk and long service life.

Note: EAF has begun its transition to the new EB platform, which supersedes the old models.



N-Tools: EAF-N, EB-N & PC-N (formerly CLD-N)

N-Tools are ideal for all deep bolting applications (including dump trucks). Delivering up to 3,500 Nm, they accelerate wheel changes. The pneumatic PC-N (formerly CLD-N) is ATEX-certified for safe operation in explosive environments. Bolting connections are 350–380 mm long, with other lengths also available. They are highly suitable for bolting deep bed rims and offer very high repeat accuracy.



Pneumatic Torque Multipliers: PC-F 2 (formerly CLS), **PC-S** (formerly CLD), **PC-F 2** (formerly CLS2), **PC-SG** (formerly RCL2). By continuously rotating the torque multiplier, the CLD provides superior bolting quality compared to ratcheting screwdrivers. Compact design, robust housing, and high-quality components require minimal maintenance. ATEX-certified for safe operation in explosive environments.



Radial Gear: R & SG

Custom bolting system for plate heat exchangers (PHE), with radial or tangential gearing. Powered electrically or pneumatically. Enables continuous rotary tightening and loosening, reducing assembly and disassembly times by up to 10× compared to hand tools or hydraulic wrenches. Offers high working speed, operator comfort, and less wear compared to impact wrenches. Torque range: 560–3,780 Nm.

GLOBAL EXPERT IN WIND ENERGY

Wind Energy Sector – Expertise Backed by Global Experience. The wind energy sector is slowly beginning to take shape in Australia. In contrast, countries such as Germany have had qualified companies—like Avelon, Perle Industrieservice, DWT, Enertrag, Juwi, RES, Baju-Energie, SSC Wind, SeeBa Wind Service and RoSch Industrieservice (to name just a few)—shaping the European landscape for more than 30 years. Throughout this time, Alkitronic has been their trusted partner for bolted connections, gaining unmatched experience and expertise in the field. Alkitronic has a dedicated team of engineers specialising in the renewable energy sector, and they are now sharing this expertise with Specialised Force in Australia.

YOU HAVE THE APPLICATIONS WE HAVE THE SOLUTIONS

Wind turbines must withstand harsh environmental conditions. Often, many tons of weight must be held aloft with absolute reliability. Especially under extreme forces or weather conditions, wind-power-proven bolting techniques with high precision are critical to success. alkitronic stands out for providing complete system solutions for the bolting of wind turbines.

Through our **partnership with alkitronic®**, Specialised Force has the expertise to understand your applications and bolting requirements better than anyone. alkitronic offers a program that leaves nothing to be desired — from expert consultation and a broad product range to a complete assembly documentation system.

Whether onshore or offshore, we can support you with:

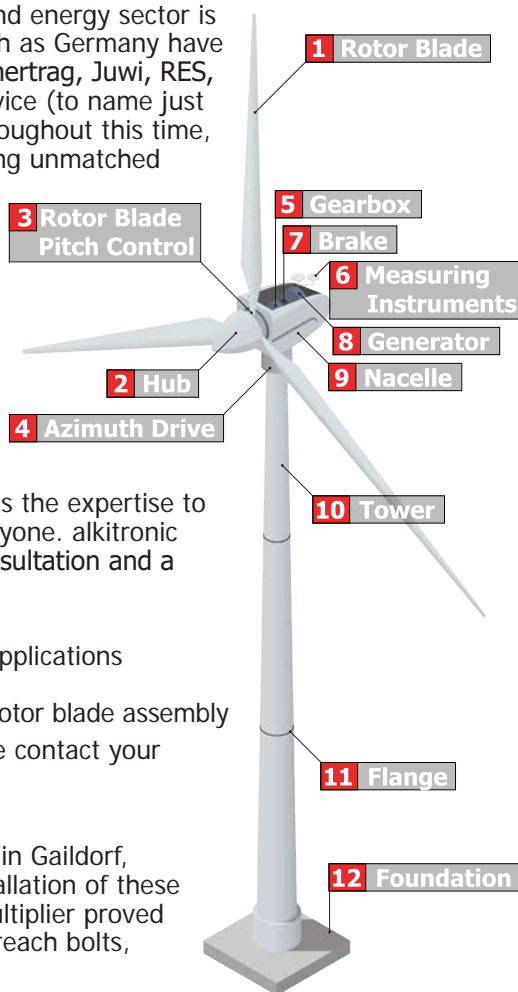
- Fast electric & Battery torque wrenches – e.g., for turbo assembly applications
- Efficient manual tools – e.g., for simple maintenance purposes
- Tools for the torque-angle method – ideally suited, for example, for rotor blade assembly

For more information on Alkitronic® products and applications, please contact your Specialised Force representative.

World Champion of Height – Wind Assembly Excellence

Alkitronic® tools were part of the record-breaking MAX BÖGL project in Gaildorf, Germany—the highest wind power plant in the world. During the installation of these innovative wind turbines, the Alkitronic EF 300 Plus electric torque multiplier proved easy to handle, even in tight spaces. This ensured that even hard-to-reach bolts, such as those on rotor blades, could be optimally tightened.

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TORQUE WRENCHES & MULTIPLIERS



The natural battery storage in Gaildorf.
Foto: © Max Bögl Wind AG, photographer: Reinhard Mederer.



One of the wind turbines under construction.
Foto: © Max Bögl Wind AG, photographer: Holger Hessenthaler.



Attaching the leaves. Foto: © Max Bögl Wind AG, photographer: Holger Hessenthaler.

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GLOBAL EXPERT IN WIND ENERGY

alkitronic®
Requirements:

- Precise and weather-proof bolting techniques.
- Tons of weight must be held at lofty heights with absolute reliability.
- Reliability even under extreme forces or weather conditions.

Application example:

- e.g. maintenance on tower bolts
- e.g. replacement of gear boxes or generators in the nacelle



The alkitronic EF in use at the rotor blade bolting.



Bolting connections under confined conditions in the rotor housing.



HG 20 AF 60 M36-HV Maintenance on a tower bolt, torque: 2,800 Nm

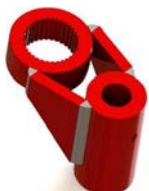


EC-S 65 M36-HV Maintenance on a tower bolt, torque: 2,795 Nm

SPECIAL SUPPORT ARMS FOR WIND ENERGY

**Sliding Support D72**

The DMA was developed on behalf of GE Wind and is used in the maintenance of the rotor blade bolts of wind turbine models with a rated power of 2/3MW. For EF-S 300/400; EC-S 70/80

**DMA-Generator frame L=160**

The DMA was developed on behalf of GE Wind and is used in the maintenance of the main gearbox bearing of wind turbine models with a rated power of 1.5 MW. It can be combined with any wrench size 60mm accessories. For HG 30 in service

**DMA 105E**

The support was developed for the Enercon company. It is used inside the tower of the wind turbines for bolting cases of up to 6,500 Nm. It can be combined with any accessories of wrench size A/F 80/M48. For EC-S 105

**DMA-Generator frame L=260**

The DMA was developed on behalf of GE Wind and is used in the maintenance of the rotor bearing of wind turbine models with a rated power of 1.6 MW. It can be combined with any wrench size 75 mm accessories. For EF-S 600; HG 40/50

STEEL CONSTRUCTION

Requirements:

- Bolted connections have to withstand permanent strain.
- Precise and weather-proof bolting techniques.
- New standards and requirements for bolted connections have to be fulfilled.

Application example:

- e.g. construction of stadiums
- e.g. installation of mobile roofing

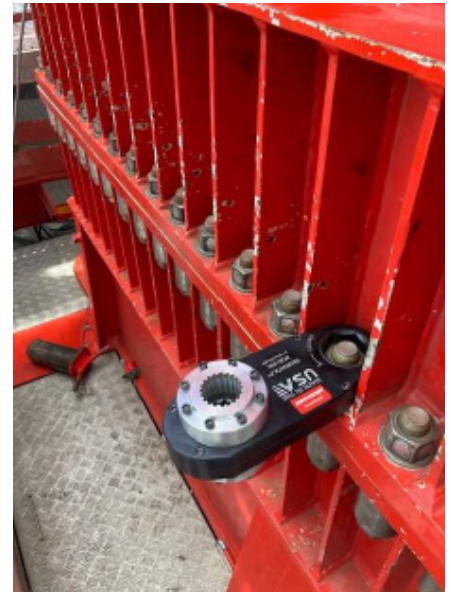
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Construction of steel mast for wind turbine using EAF 2/280



Construction of roller coasters using EAF



Dis-/Assembly of fairground ride: 800 to 1,225 Nm with different bolt sizes, limited space (40mm)
alkitronic® tools used: EAF 2/150, XCE Link 3:1 AF 46

CRANE CONSTRUCTION

alkitronic®

Requirements:

- Extended crane service life in all weather conditions.
- High working speed and precision required.
- Significantly higher loosening forces are required than in ordinary bolting applications.

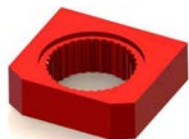
Application example:

- e.g. dis-/assembly of cranes



Crane assembly using angled electric torque multiplier EC-A, EF-A with special support for Liebherr

SPECIAL SUPPORT ARMS FOR CRANE CONSTRUCTION



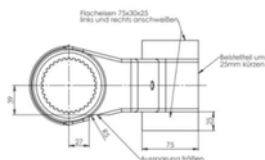
Support Square CTT

Tower crane e.g.: Manufacturer Comedil/Peiner up to max. 5,000Nm
For EC-S/EC-A 80/90/100; EF-S/EF-A 400/600; EAF/EAFW 2/400/600



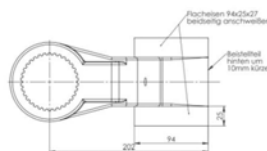
DMA Saez/Liebherr EC

Tower crane e.g.: Manufacturer Liebherr EC M48 5800 Nm; Saez up to 6,500 Nm
For EF-A 400/600; EC-A 80/90/100; EAF/EAFW 2/400/600



Liebherr DMA D72

Liebherr tower crane, applications up to 5,000 Nm
For EC-A 80/90; EF-A 400; EAF/EAFW2/400/600



Liebherr DMA D72

Liebherr tower crane, applications starting from 5,000 Nm
For EC-A 100; EF-A 600; EAF/EAFW2/600

HEAVY MOBILE EQUIPMENT

Requirements:

- Bolts must be placed and tightened within a fixed schedule without requiring later re-tightening.
- Speed and precision required.
- Safety is crucial.

Application example:

- e.g. bolting deep bed rims
- e.g. maintenance of hydraulic cylinders

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EAF 2/280 N12 on a mining truck CAT 793D
Wheel Torque: 1,000 Nm



EAF 2/280 N12 on a mining truck Komatsu 730E
Wheel Torque: 1,850 Nm



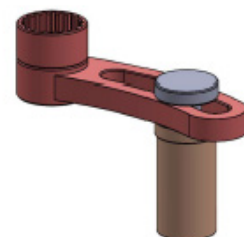
EAF 2/280 N12 on a ternium truck for steel transportation –
Wheel Torque: 400 Nm



EAF 2/280 N12 on a Wheel Loader John Deere 744K-II – Wheel – Torque: 1,000 Nm



Curved sliding special support arm for use on a wheel rim for Bell Equipment



MINING

Requirements:

- Regular maintenance with the highest safety precautions required.
- Highest power and precision needed.
- Tools must be tough and extremely sturdy.

Application example:

- e.g. maintenance on mining trucks
- e.g. maintenance on crushers

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Sotreq Caterpillar - Tracked excavator CAT 744KII – Turntable
Torque/rotation angle: 332 ft.lbs/450 Nm + 90°
Tools used: EC-S 65, EAF 2/600



Komatsu - Mining truck 793E - Upper inner coupling
Torque: 1918 ft.lbs/2,600 Nm
Tools used: EAF 2/600



Vale N5 Mine – CAT Engine head
Torque/rotation angle: 258 ft.lbs/350 Nm + 90°
Tools used: EC-S 65



Vale 511D Mine - Sandvik Cone Crusher CS 660
Torque: 2323 ft.lbs/3,150 Nm
Tool used: EAF 2/600

MINING



Vale Caue Mine - Mining truck CAT 793D – Brakes
Torque: 369 ft.lbs/500 Nm Tool used: EAF 2/280 N12

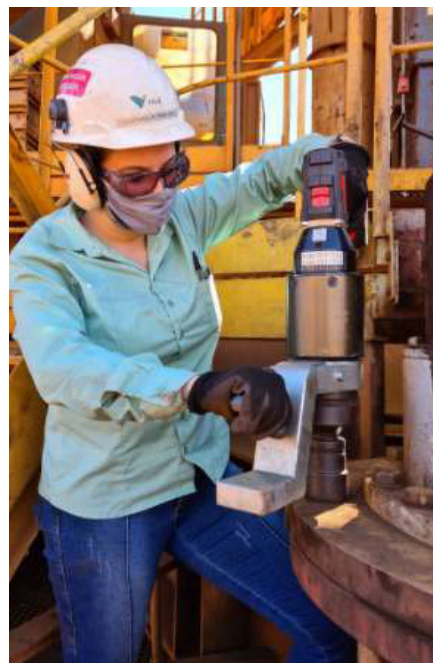


Mosaic Fertilizers - Scania truck G440 – Spring bar
Torque: 1254 ft.lbs/1,700 Nm Tool used: EC-S 60



Komatsu - Mining truck 730E - Bearing lower coupling
Torque: 996 ft.lbs/1,350 Nm Tool used: EC-S 60

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Vale Pico Mine - Crusher – Reloading machine
Torque: 1475 ft.lbs/2,000 Nm
Tool used: EAF 2/600



Vallourec - John Deere Feller – Engine mount
Tool used: EAF 2/280 N12

TORQUE WRENCHES & MULTIPLIERS

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AGRICULTURE & FORESTRY

Requirements:

- High speed needed due to weather dependency.
- Working in dusty and wet environment.
- Accurate precision needed.

Application example:

- e.g. blade exchange



Rim exchange of a forage harvester using EAF – torque: 550 Nm



Maintenance on a forage harvester using EAF

WATER, CHEMICALS, OIL & GAS

Requirements:

- Everyday maintenance in refinery: opening and closing huge valves (valve pins) to carry out cleaning operations.
- Cheap torque wrenches wear out quickly and must be sent for repair. This increases maintenance costs of refineries considerably.

Application example:

- e.g. tightening and loosening flange connections
- e.g. valve maintenance
- e.g. maintenance of heat exchangers



Working on sealing a large valve, which is used to control wellbore fluids with an EAF. Torque: 3600 Nm.



Maintenance and repair of plate heat exchangers with EC-R

FOOD AND BEVERAGE

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Requirements:

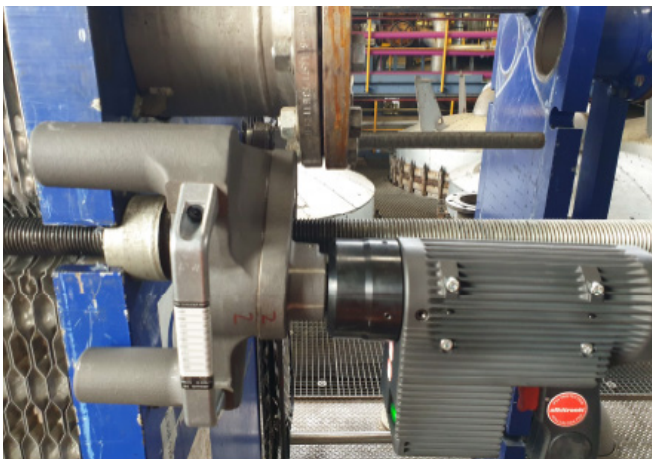
- Very often the plate heat exchangers used in these sectors must be maintained, serviced, repaired, and fastened together tightly.
- Saving time when loosening and tightening heavy bolt connections is essential.

Application example:

- e.g. maintenance of plate heat exchangers
- e.g. tightening heating rods of a coffee machine



Opening and retightening of the spindles of a plate heat exchanger using alkitronic® EC-R



Maintenance of a plate heat exchanger with EC-SG



CLS2-SG on a plate heat exchanger



Maintenance of plate heat exchanger
Tool used: EAF-SG



Maintenance of plate heat exchanger using
Tool used: EAF-R 46

RAILWAY INDUSTRY

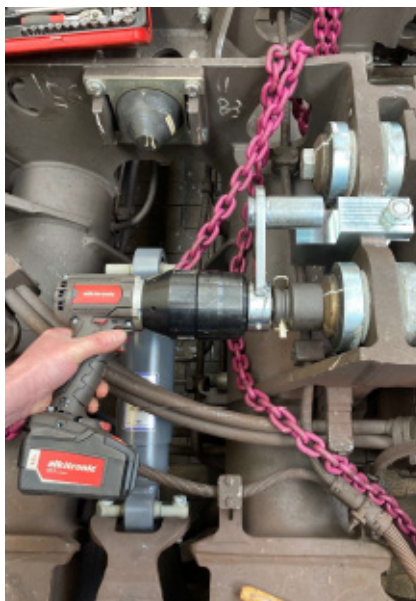
Requirements:

- Quick and precise bolting required.
- Working even in difficult weather conditions.

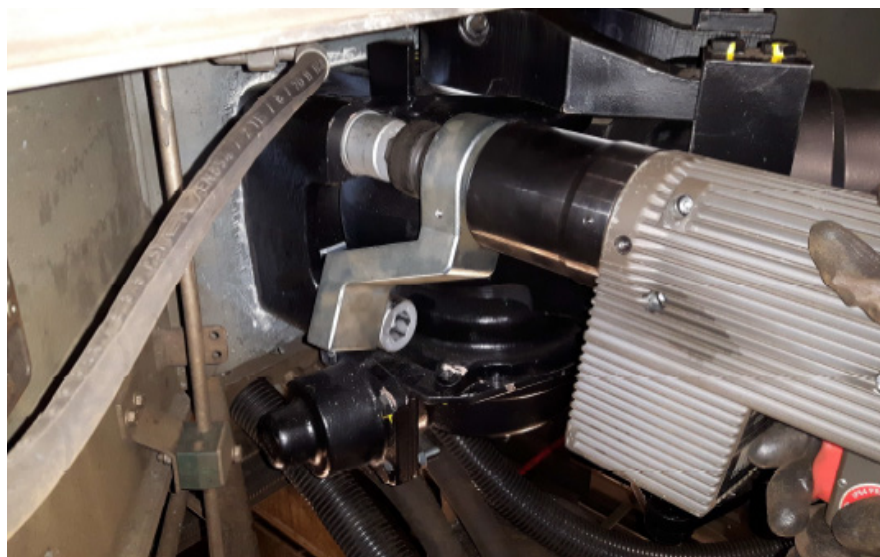
Application example:

- e.g. replacement of rubber buffers
- e.g. rail cars with manual crank system to raise and lower decks

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alkitronic® developed a customised solution for a German company from the subway segment. This is an axle application, here the rubber buffers need to be replaced with the help of a high torque precision tool. Our EAF 80 (400-800Nm) with the corresponding special support has become the standard solution for this specific maintenance requirement.



EC-S 65 on a Bombardier wagon hitch.



SPECIAL SUPPORT ARMS FOR THE RAILWAY INDUSTRY



DMA Talent 220

The DMA was developed on behalf of Bombardier and is used in bolting cases with 2,000 Nm on the coupler of the "TALENT" railcar family. For every alkitronic® torque multipliers with D54 and min. 2,000 Nm e.g., HSD 200



Double – DMA 2 1/2

The double DMA was developed in 1995/1996 on behalf of Gorelectrotrans St. Petersburg to ensure controlled tightening of the central nut of a cable car. It is used in combination with the Staco 2 1/2" - SW 215. For: EF-S 2000/4000

ENGINE REPAIR

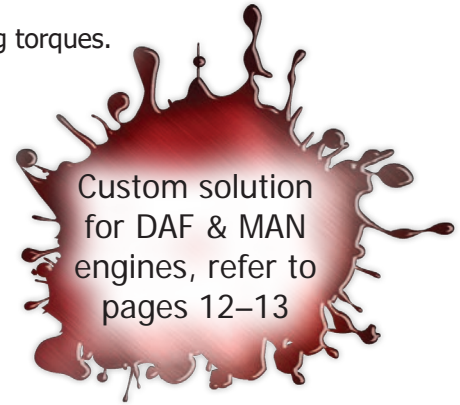
Requirements:

- Quick and precise bolting required.
- Consideration of highest safety aspects when bolting on motors.
- Fast and efficient disassembly even with rusted bolts and high loosening torques.

Application example:

- e.g. operation on cylinder heads

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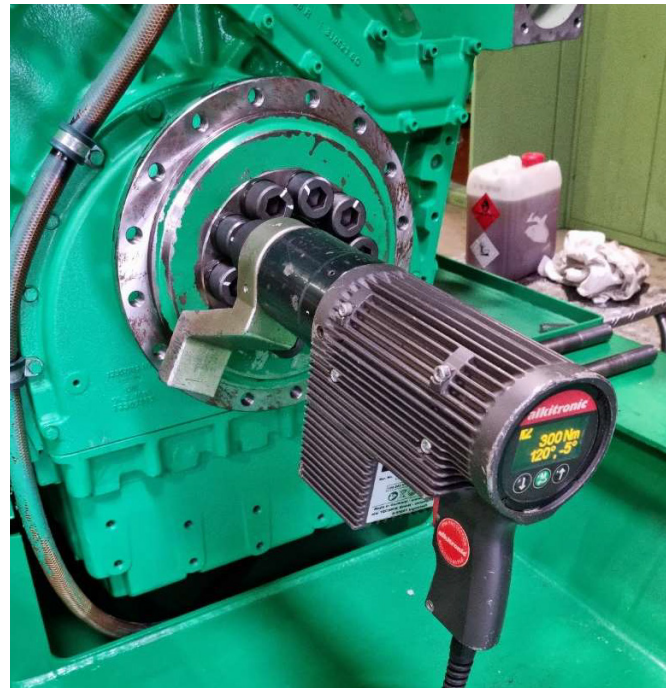
Tightening the main bolts (crankshaft bearings) of a Caterpillar C18 engine using EAF 150 with special support. (Here without crankshaft for testing.)



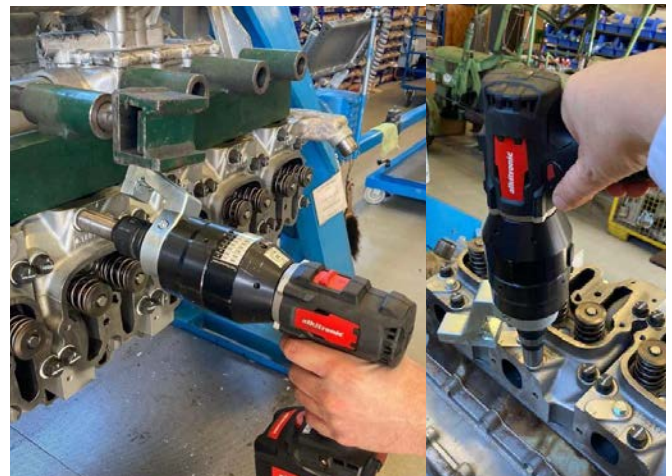
Connecting rod bearing assembly on a MAN engine EAF 150 (Pre-torque and angle of rotation)



Bolting a flywheel to a Caterpillar 12-cylinder engine using EAF 150 with special support arm



Cylinder head bolts with torque and rotation angle up to max. 1,400Nm - Tightening flywheel of MWM diesel engine with torque plus rotation angle using an EC-S 65 with mode 2



Cylinder head assembly on a MTU engine using EAF 150