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alkitronic®

2023
Katalog

**HOME OF
TORQUE
POWER**

Mounting-Documentation-Systems (MDS) + APP

- High controllable torque output
- Guaranteed traceability and documented joints
- Repeatability in tightening – regardless of disturbances
- High mobility – independent of external power supply
- Torque- and angle sensor directly on the square drive
- Several preset programs
- Menu-guided, easy operation

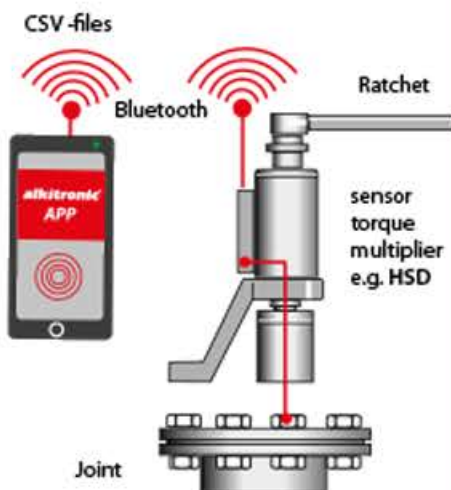
HSD (manual)



CLSD (pneumatic)



alkitronic® APP application diagram



alkitronic® APP

- For use in combination with alkitronic® HSD and CLSD
- Multilingual
- Simple operation
- Suited for iOS and Android smartphones
- Bluetooth interface
- International quality standards



alki TECHNIK GmbH

Development, Production and Distribution of Bolting Systems

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**Product
Range**



THERE ARE MANY TECHNIQUES FOR TIGHTENING BOLTS.
WE OFFER THE RIGHT TOOL FOR YOUR APPLICATION.

- ✓ **ELECTRIC** (Electric Torque Multipliers)
- ✓ **PNEUMATIC** (Pneumatic Torque Multipliers)
- ✓ **HYDRAULIC** (Hydraulic Torque Wrenches)
- ✓ **MANUAL** (Manual Torque Multipliers)

alkitronic XE-SERIES



THE ELECTRICS

Electric torque multipliers by alkitronic[®] are ideal for high torques, fast operating speeds, high precision, and tightening of many joints due to its fast speed. From 75 to 31,345 ft.lbs, the IP54 rating protects the tool against moisture and dust. Up to 4,425 ft.lbs, the alkitronic[®] EB (battery-driven) is portable and always ready for use.

alkitronic XP-SERIES



THE PNEUMATICS

Forget impact wrenches with a torque setting! Unlike impact wrenches our tools need no hammer mechanism. They rotate continuously. This produces greater bolted joint accuracy and longer tool life. Also for use in hazardous areas! Up to 35,400 ft.lbs.

There is no substitute for the perfect torque multiplier or hydraulic bolting solution. **Whether for assembly, production, or construction sites, one should apply the best possible way to obtain the ideal torque.**

Using alkitronic's universal bolting solutions program, you do not have to compromise performance, accuracy, efficiency, productivity, nor safety. **The unique quality of our solutions made in Germany gives you a leading edge in performance.**

 **MADE IN GERMANY**

alkitronic® X^M-SERIES



THE HYDRAULICS

Hydraulic wrenches are ideal when heavy bolt connections with large threads need to be tightened with great force in areas difficult to access.

Torques up to 61,200 ft.lbs. Also they are safe for applications in areas exposed to explosion hazards. Our fast hydraulic pumps speed up your work flow and thus save you time and money.

alkitronic® X^M-SERIES



THE MANUALS

Manual torque multipliers by alkitronic® replace hazardous and inaccurate impact wrenches, pipe extensions and other inadequate tools.

An anti-wind-up ratchet prevents a back-wind when tightening. This is designed for safer tool operation.

Torques from 150 to 36,880 ft.lbs.

M-HG



From 150 to 36,880 ft.lbs. Equipped with anti-windup ratchets.

alkitronic® Norwolf Missing -/XCE Link



Missing Link up to 3,600 ft.lbs. Uses ratchet or non-ratchet wrenches. Accurate - operates using levers, not gears. XCE Link up to 7,200 ft.lbs.

Flange Buddy



Ideal for separating of piping for inspection works/maintenance. Easy and absolutely safe mechanical separation of piping flanges.

Accessories Standard



Flexible solutions for your applications.

alkitronic® and Norwolf manual torque multipliers replace impact wrenches, pipe extensions, and other inadequate and hazardous methods of torque tightening. They are superior to ordinary torque wrenches.

Feel the difference!

- High level of operation safety
- Low energy input, accurate transfer of high torque. No energy source needed - "Manpower" is enough!

M-HG

- Robust power gear for highest possible operational demands; produced in a chipless precision process (casting)
- Precision anti-wind-up ratchet for efficient operation with very short movements and short assembly time
- Integrated shearing pin prevents input overload

XCE Link

- Continuous rotation for use with any electric or pneumatic driven torque multiplier
- Robust, low-wear, long service life

H-AT



Up to 53,100 ft.lbs.

H-AX



Up to 36,300 ft.lbs with interchangeable hexagon link.

Norwolf X Driver System



Up to 61,200 ft.lbs with interchangeable hexagon link.

Pump NOVA



Electric driven hydr. pump up to 10,000 psi, max. 915 cu.in./min.

Pump VELOX



Electric driven hydraulic pump. Up to 10,000 psi.

Pump LEVA



Electric driven hydraulic pump up to 10,000 psi. Small, low weight, reliable - ideal for service use.

Hydraulic wrenches are sometimes the first choice for certain industrial bolting applications; i.e. in restricted and difficult to access bolt connections. Our wrenches and pumps offer:

- For bolting applications that require powerful performance in tight spaces, the flat design is made to fit in small spaces without sacrificing power. This gives you better accessibility, better power, and reduced repair costs
- Due to trouble-free reaction, torque accuracy is achieved without interference by lateral forces
- Fast and simple changing of the hexagon link ensures flexible tool operation
- The hydraulic pumps are extremely robust and handle high work rates
- Integrated motor protection prevents overload damages
- Electric pumps NOVA, VELOX and LEVA can be used worldwide in all power supplies

CLS



From 45 to 2,580 ft.lbs.
Fast and compact.

CLS2



From 90 to 35,400 ft.lbs and
power gear.

CLD



From 120 to 7,230 ft.lbs.
Comfortable and rotating.

CLV



For 1-4 torque multipliers, up to
2,580 ft.lbs. With remote control.

RCL



For bolting connections
on plate heat exchangers.

CLD-N



With extension
for low-lying joints.

Pneumatic torque multipliers by alkitronic® offer far more than impact wrenches or ratchet hydraulic wrenches. During the bolting process, they rotate continuously without any hammer or ratchet mechanism. Tightening the components is thus made smoother, faster and more accurate.

- Torque accuracy is considerably higher than that of impact wrenches
- Compact design and the cast aluminium housing ensure high strength
- High-performance gear ensures fast operation speed
- Simple one-finger rocker switch ensures a more comfortable operation
- All pneumatically driven torque multipliers can be EX certified upon request (II 2 G D c IIB T6)
- Optional: noise reduction filters, 2 speed tools, assembly, etc.

EB-S (with battery)



From 90 to 4,425 ft.lbs.
Bolting programs, Bluetooth,
Documentation of bolted joints.

EAF (with battery)



Battery driven 2-speed torque
multiplier, up to 4,425 ft.lbs.,
fully-automatic release function.

EAF-N (with battery)



With extensions for
applications i.e. on deep rims.

EF-S / EF-A



From 315 to 30,980 ft.lbs.
Bolting programs, Bluetooth.
EF-A = angled version.

EC-S / EC-A



From 55 to 4,815 ft.lbs.
Bolting programs, Bluetooth.
EC-A = angled version.

R / SG



For bolting connections on
plate heat exchangers.

In 1984, company founder Albert Kipfelsberger invented and patented the electric torque multiplier. Immediately it demonstrated major advantages over hydraulic torque wrenches.

- Greater **accuracy due to automatic motor shut-off** and extremely high rundown speed
- **Repeat shut-off accuracy $\pm 2\%$**
- Torque tools with brushless synchronized motor creating a **greatly reduced risk of failure** and maximum flexibility
- Models with protection class IP54 **immune to dust and rain**
- Tools usable in all international main grids (100-253 V / 45-66 Hz) **with constant torque precision**
- Master quality boltings according to the torque/angle procedure
- For user-specific applications, **the manufacturer can activate optional modular software**
- **Bluetooth interface** for communication or documentation of the bolted joints (via alkitronic® APP)



EB-S

Battery driven
torque multiplier



The new EB – Extreme Flexibility

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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 ± 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.



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

Software suite 2

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)

Specifications

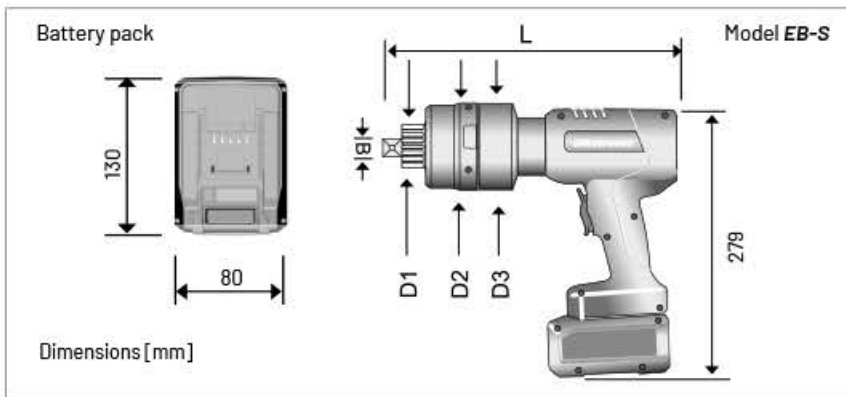
All **alkitronic® EB** torque multipliers with CE-certification.

Caution! The Li-Ion battery is preset to 4 Ah (72 Wh) so that it can be shipped or transported in accordance with special regulation 188.

Operating panel



Technical Data



Models EB-S

Type		EB-S 80	EB-S 150	EB-S 180	EB-S 250	EB-S 350	EB-S 480	EB-S 600
Torque ranges (approx.)*	Nm	170-850	280-1400	360-1800	500-2500	700-3500	960-4800	1200-6000
	ft.lbs	125-625	205-1035	265-1330	365-1845	515-2580	705-3540	885-4425
Square drive	B	3/4"	3/4"	1"	1"	1"	1 1/2"	1 1/2"
Diameter (approx.)	D ₁	41 mm	41 mm	41 mm	54 mm	54 mm	72 mm	72 mm
Diameter (approx.)	D ₂	88 mm	88 mm	88 mm	88 mm	88 mm	98 mm	109 mm
Diameter (approx.)	D ₃	88 mm	88 mm	88 mm	88 mm	88 mm	88 mm	88 mm
Length (approx.)	L	330 mm	330 mm	375 mm	382 mm	382 mm	400 mm	407 mm
Weight without DMA** (approx.)	kg	6,2	6,2	7,7	8,3	8,3	10,3	11,5

*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 release according to pre-set angle degrees.

Mode 2 / M2 (Option)

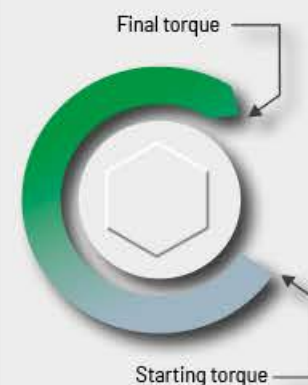


Torque/angle procedure for high-quality bolting connections. Display example of pre-torque, angle and release angle.

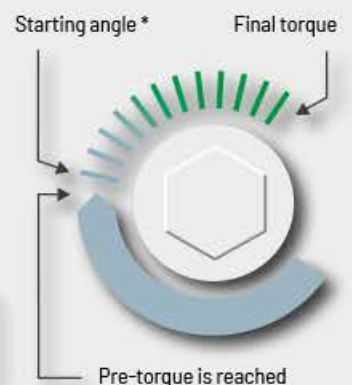
During the bolting process, the current torque value is shown in the display. Reaching the set value is indicated by an "OK". If the selected value cannot be achieved, the bolting operation is evaluated as "nOK".

Scheme bolting programs Mode 1 und Mode 2

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.

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alkitronic® X E-SERIES



EC

Electric Torque Multiplier



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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.



Specifications

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
Software suite 2 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)

Remote control of single or multiple torque multiplier can be manual or fully automated.

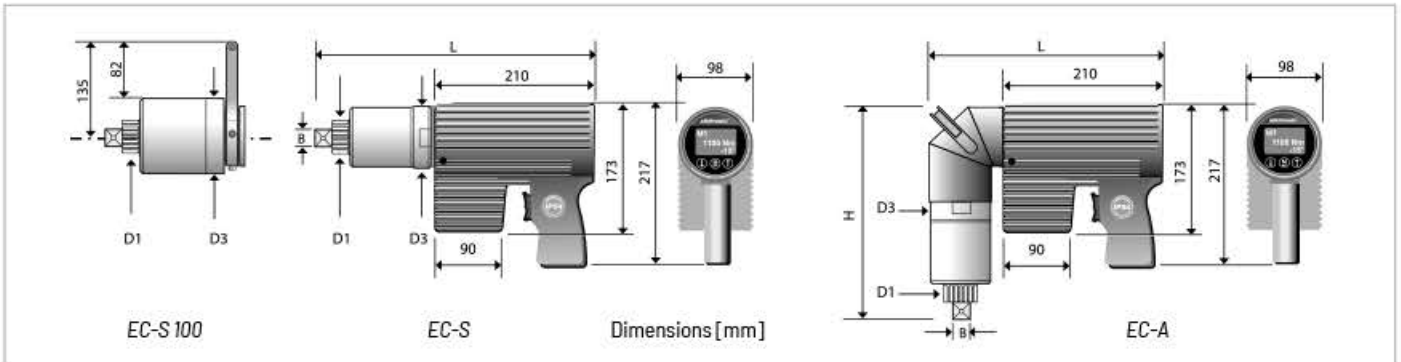
Special solution: Preset torque increment according to customer's requirement (10 Nm / 10 ft.lbs min). All **alkitronic®** torque multipliers with CE-certification.

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).



Technical Data



Models EC-S

Type		EC-S 10	EC-S 20	EC-S 30	EC-S 35	EC-S 40	EC-S 50	EC-S 60	EC-S 65	EC-S 70	EC-S 80	EC-S 90	EC-S 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.)	D ₁ mm	41	41	41	41	54	54	54	54	72	72	72	72
Diameter (approx.)	D ₃ 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		EC-A 50	EC-A 60	EC-A 65	EC-A 70	EC-A 80	EC-A 90	EC-A 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.)	D ₁ mm	54	54	54	72	72	72	72
Diameter (approx.)	D ₃ mm	88	88	88	98	98	109	109
Length (approx.)	L mm	310	310	310	318	318	326	315
Height (approx.)	H mm	300	305	305	315	315	345	350
Weight without DMA (approx.)	kg	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.

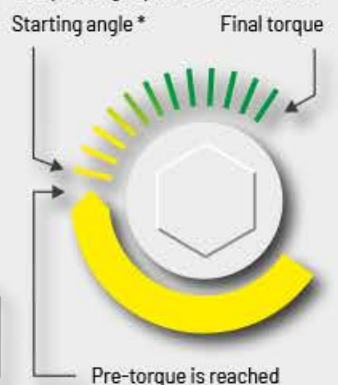
During the bolting process, the current torque value is shown in the display. Reaching the set value is indicated by an "OK". If the selected value cannot be achieved, the bolting operation is evaluated as "nOK".

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.

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alkitronic® X E-SERIES



EF

Electric Torque Multiplier



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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 with high operating comfort in confined spaces for torques of 500 to 9,800 Nm (370 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; in addition, 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 ± 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.

Specifications

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
- Software suite 2**
- Premium:** Torque/angle procedure with adjustable min./max. torque limitation
- Software suite 3:** Bolting with preset rotations and torque limit
- 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)

Mode 2 / M2 (Option)

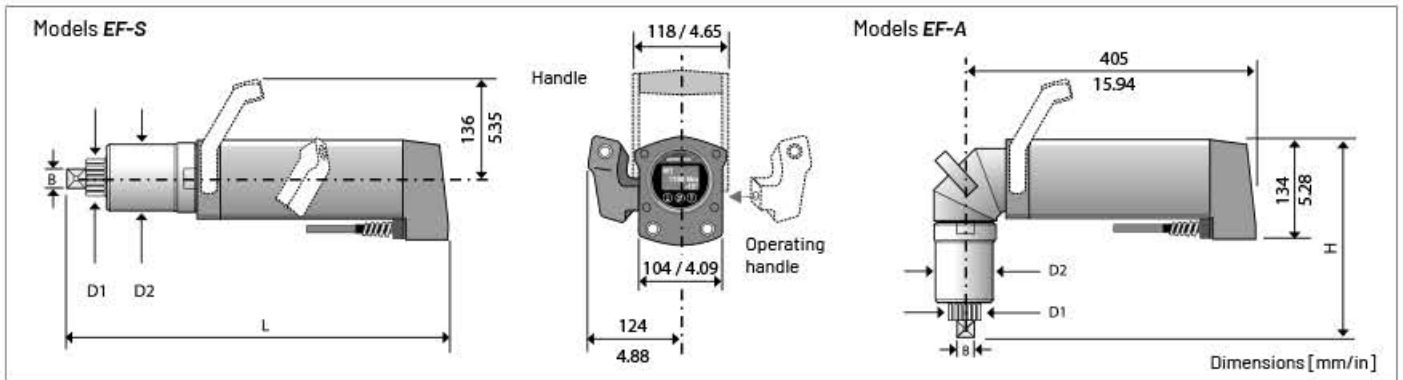


Bolting via torque. Automatic release according to pre-set angle degrees.

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".

Technical Data



Models EF-S

Type		EF-S 250	EF-S 300	EF-S 400	EF-S 600	EF-S 800	EF-S 1000	EF-S 2000	EF-S 4000
Torque range (approx.) *	Nm	430-2700	500-3100	500-4250	1150-6200	2000-7800	2050-9800	3500-20600	6200-42000
	ft.lbs	315-1990	370-2285	370-3135	850-4575	1475-5755	1510-7230	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.)	D ₁	mm / in	54 / 2.13	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.)	D ₂	mm / in	85 / 3.35	98 / 3.86	98 / 3.86	109 / 4.29	133 / 5.24	173 / 6.8	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
Weight without DMA** (approx.)		kg / lbs	13 / 29	14 / 31	14.5 / 32	16 / 35	19.5 / 43	27 / 59.5	60 / 132
Idle speed		rpm	10	8	6	5	4	3	1

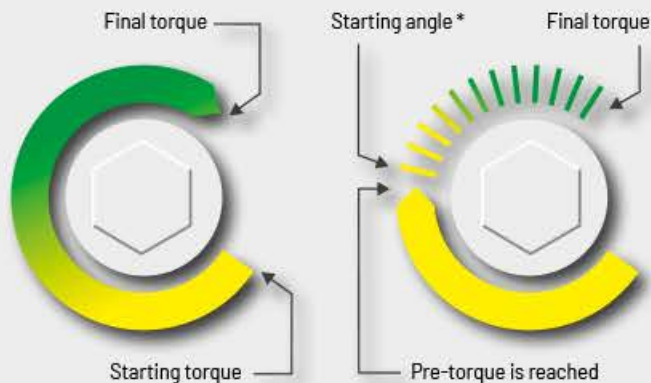
Models EF-A

Type		EF-A 400	EF-A 600	EF-A 800	EF-A 1000
Torque range (approx.) *	Nm	500-4250	1150-6200	1060-8000	2050-9800
	ft.lbs	370-3135	850-4575	780-5900	1510-7230
Square drive	B	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Diameter (approx.)	D ₁	mm / in	72 / 2.83	72 / 2.83	91 / 3.58
Diameter (approx.)	D ₂	mm / in	98 / 3.86	109 / 4.29	133 / 5.24
Height (approx.)	H	mm / in	320 / 12.6	350 / 13.8	380 / 15
Weight without DMA** (approx.)		kg / lbs	15.5 / 34	17.5 / 38.6	20 / 44
Idle speed		rpm	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

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 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.

Accessories: Remote control with operating handles



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

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alkitronic® X E-SERIES



E (PG)

Electric Torque Multiplier



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Applications

- **alkitronic® E**, 2-speed torque multiplier for torques from 370 Nm to 10,000 Nm (270 ft.lbs- 7,375 ft.lbs).
- The indestructible workaday torque tool is used to loosen or tighten heavy-duty bolted connections with high **on-the-job safety** and **short assembly times**.
- **Permanently higher joint quality**, compared to ratchet torque tools or tools with impact mechanism, by continuous rotation of the square drive.
- Efficient operation with short fastening cycles: Fast gear for run down and power gear for highest torques and precision.

Advantages

- **Ease of operation:** Fast switching direction of rotation as well as speed-changes. **Wide torque range**, choice from seven torque values pro gear.
- **Operator convenience and health-consideration:** Lightweight ergonomically designed tool. The 360 degree rotating handle ensures convenient working. None of the reaction forces are transferred to the operator.
- Smart processor-controlled, switch-off electronics for consistently **precise reproduction of the pre-selected torque**.

alkitronic® Specials

- **Break-proof, impact-proof and resistant to corrosion:** Robust Motor housing made of special polymer.
- **Proven modular high-performance gears**, produced in a chip-free high-precision process.

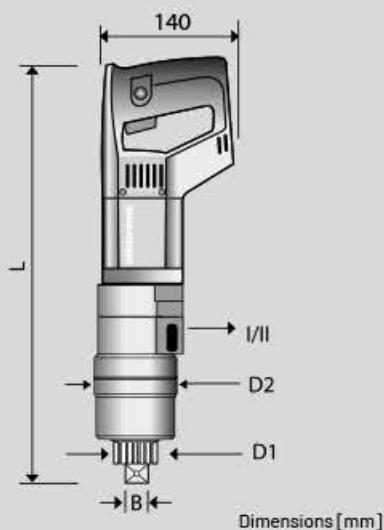


Technical Data: Models **alkitronic® E**

Type		PG 2 / 80	PG 2 / 150	PG 2 / 250	PG 2 / 350	PG 2 / 600	PG 2 / 800	PG 2 / 1000
Torque range (approx.) gear 2 *	Nm	370 - 580	540 - 915	600 - 1100	650 - 1230	800 - 2330	900 - 2960	960 - 3580
Torque range (approx.) gear 1 *	Nm	480 - 890	735 - 1500	1000 - 2500	1180 - 3500	2000 - 6000	2370 - 8000	2900 - 10000
Torque range (approx.) gear 2 *	ft.lbs	270 - 425	400 - 675	440 - 810	480 - 910	590 - 1720	665 - 2185	710 - 2640
Torque range (approx.) gear 1 *	ft.lbs	355 - 655	540 - 1105	735 - 1845	870 - 2580	1475 - 4425	1750 - 5900	2140 - 7375
Square drive	B	3/4"	3/4"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Diameter (approx.)	D ₁	mm	41	41	54	72	72	91
Diameter (approx.)	D ₂	mm	88	88	88	98	109	133
Length (approx.)	L	mm	480	480	530	550	560	590
Weight without DMA (approx.)**	kg		6,5	6,5	8	9,5	12	14,5
Idle speed gear 2	r/min		46	20	9	6	4	3,4
Idle speed gear 1	r/min		15	7	3	1,8	1,1	0,9

*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

Dimensions



Technical informations



Electrical data: Mains supply 230V/50Hz.
Repeat shut-off accuracy $\pm 4\%$ for the same bolting application.
Housing: Protection category II, protection class IP 20.

alkitronic®
HOME OF TORQUE POWER

alkitronic® products
Made in Germany by

alki TECHNIK GmbH
Development, Production and
Distribution of Bolting Systems

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MDS

Mounting
Documentation Systems



Applications

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

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

Advantages

General

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

alkitronic® HSD

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

alkitronic® CLSD

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

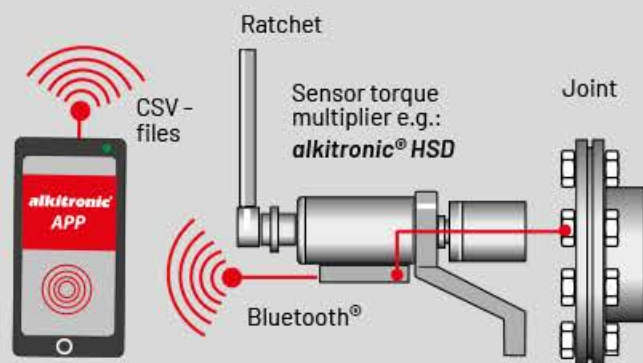
alkitronic® EASD

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

alkitronic® specials

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

alkitronic® APP application scheme

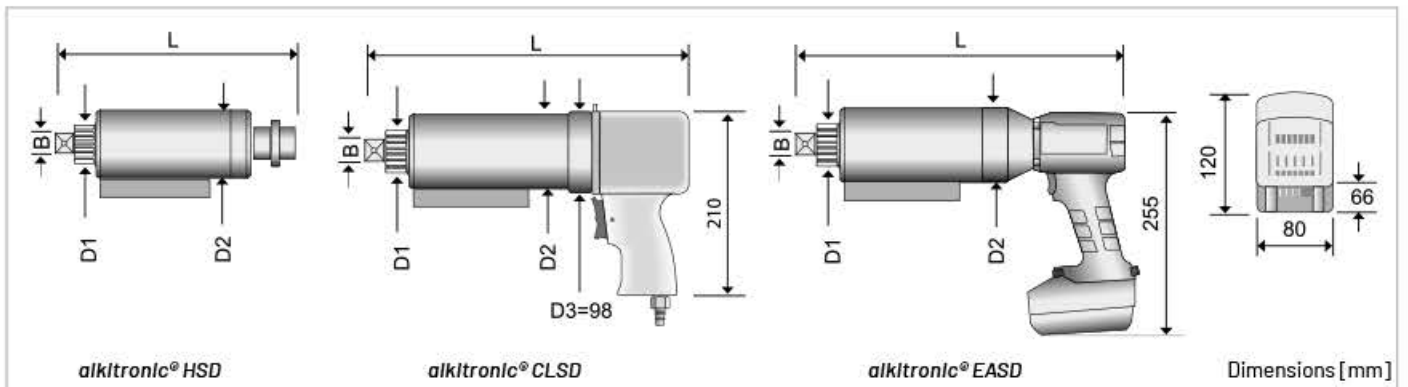


alkitronic® APP app for iOS® and android® mobiles and platform independent data exchange via CSV file transfer.

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



Technical Data



Models HSD / CLSD / EASD

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

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

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

1 Tightening with specified torque

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

2 Tightening with torque/angle procedure

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

3 Checking of torque

- Monitoring of already tightened bolt connections.

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

4 Determination of required angle

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

5 Display actual torque only with models EASD and CLSD

- Display and recording of the actual torque.

Operating range HSD / CLSD / EASD with OLED graphic display

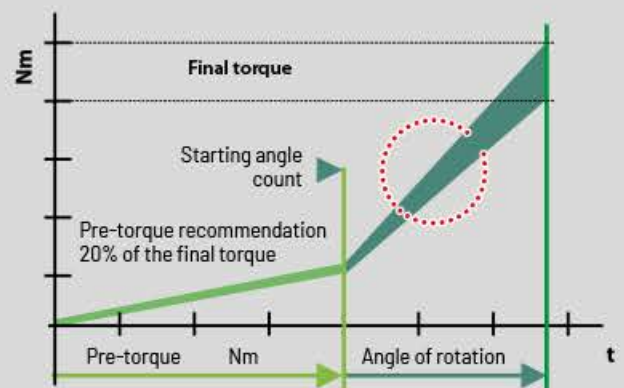
Example for menu-guided operation (HSD)



Examples Display image in mode "Program 1"

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

Diagram for program 2 and 4



Information on rotational angle setting for torque/angle procedure

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.

havasis

alkitronic® X P-SERIES



CL

Pneumatic
Torque Multiplier



Kurumsal & Ürünler
havasis.com.tr



Sipariş & Danışma Hattı
0549 449 3535

Applications

- **Continuous rotation**, tightening, or loosening for all heavy duty fastening connections.
- **Perfect for bolted applications** in hazardous, explosive environments.
- **alkitronic® CLS** quick, compact torque multiplier for torques of 55 to 2,555 ft.lbs (75 to 3,460 Nm).
- **alkitronic® CLD comfortable torque multiplier** with rotating handle for torques of 225 to 7,225 ft.lbs (305 to 9,795 Nm).
- **alkitronic® CLS2** 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® CLD** - the 360 degree rotating handle ensures comfortable operation. Barely any reaction forces are transferred to the user.
- **alkitronic® CLS2** 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, high-precision process produce high loads with low wear.
- **alkitronic® CLS2** with uniquely high torque - 35,855 ft.lbs. (48,610 Nm)
- **Optional silencer levels** to reduce the noise from the motor exhaust on request.

Specifications



On request, you will receive our pneumatic multipliers with **ATEX-Certification: II 2 G D c IIB T6**

Prerequisites for best work with the indicated torques are an operating pressure of 29-101 psi (2-7 bar) at a volumeflow of approx. 21.2-31.8 cfm (10-15 l/sec). The torque accuracy depends on the stability of the supply system.

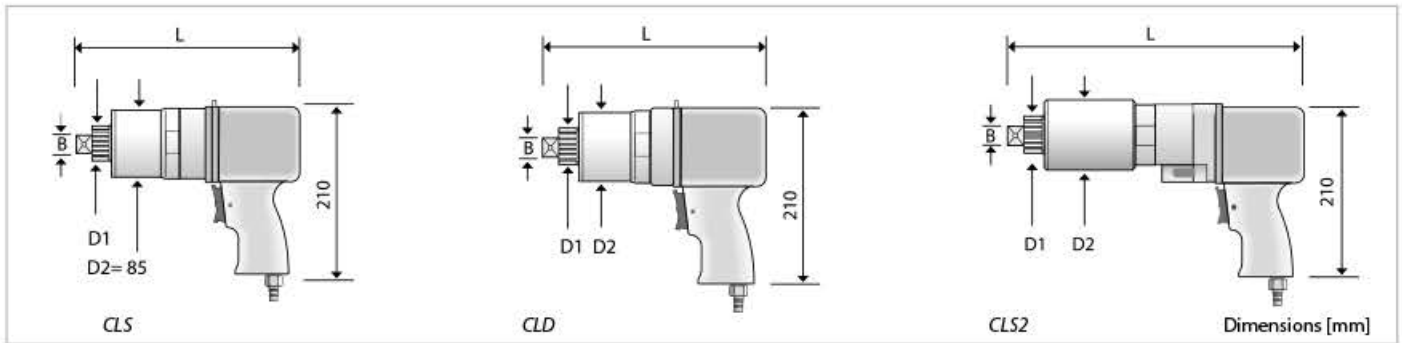


alkitronic® CLS2, 2-gear pneumatic torque multiplier. Mechanically switchable from fast gear to power gear.

alkitronic® CLD torque multipliers in use (figures on the right). Screw connections at a bolt circle and a diesel unit for large construction machines



Technical Data



Models CLS

Type		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
	ft.lbs	55-165	70-205	100-290	120-360	225-660	270-795	365-1070	475-1400	670-1970	870-2555
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.)	D ₁	mm	41	41	41	41	41	54	54	54	54
Length (approx.)	L	mm	255	255	255	255	277	277	300	300	330
Weight without DMA (approx.)		kg	6	6	6	6	7	7	8	8	8,5
Idle speed		rpm	60	38	34	27	19	13	9	7	6

Models CLD

Type		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
	ft.lbs	225-660	270-795	365-1070	475-1400	670-1970	870-2555	1100-3230	1535-4510	1925-5665	2460-7225
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.)	D ₁	mm	41	41	41	54	54	54	72	72	91
Diameter (approx.)	D ₂	mm	85	85	85	85	85	85	98	109	173
Length (approx.)	L	mm	275	275	275	300	300	300	320	350	370
Weight without DMA (approx.)		kg	7	7	7	7	8,5	8,5	10,5	13	25
Idle speed		rpm	19	13	9	7	5	4	3	2	1,5

Models CLS2

Type		CLS2/100	CLS2/150	CLS2/300	CLS2/400	CLS2/600	CLS2/800	CLS2/1000	CLS2/3400	CLS2/4800
Torque range 2nd gear (approx.)*	Nm	120-355	170-505	385-1130	540-1585	840-2470	1010-2965	1175-3455	3310-9720	4725-13890
	ft.lbs	90-260	125-375	285-835	400-1170	620-1820	745-2185	865-2550	2440-7170	3485-10245
Torque range 1st gear (approx.)*	Nm	380-1125	550-1615	1225-3595	1720-5055	2675-7865	3210-9435	3745-11010	11575-34025	16540-48610
	ft.lbs	280-830	405-1190	900-2650	1270-3730	1975-5800	2370-6960	2765-8120	8540-25100	12200-35855
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.)	D ₁	mm	41	54	54	72	72	72	91	
Diameter (approx.)	D ₂	mm	85	85	85	98	109	133	173	
Length (approx.)	L	mm	330	330	360	380	410	410	430	
Weight without DMA (approx.)		kg	7	7,5	9	11	12	16	24	58
Idle speed 2nd gear		rpm	36	21	15	9	6	5	4	
Idle speed 1st gear		rpm	12	7	5	3	2	1,5	1	further details upon request

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

Product information

alkitronic® CLV models

Pneumatic torque multipliers with remote control for multiple bolted connections and serial assembly in semi-automatic operation. Torques up to 2,555 ft.lbs (3,460 Nm).

We will gladly provide you with comprehensive information on this.



The torque control of the pneumatic alkitronic® torque multiplier takes place via the air supply or pressure regulator of the Maintenance Unit.

Accessories

Maintenance Unit, complete with filter, regulator, oiler and 5 m/16.4 ft hose, incl. couplings.





CLV

Pneumatic Torque Multiplier



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®CLV** torque multipliers.
- **Comfortable remote control** for right-left rotation.
- **Low noise emission** by integrated muffling.

alkitronic® specials

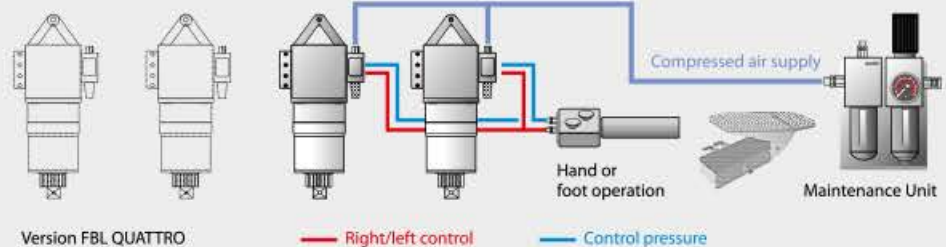
- Universal valve block for pneumatic steering according to specific requirements.
- Robust pneumatic drive with sophisticated high-performance gear, reliably used around the world.
- **alkitronic®CLV remote systems** for one to four **CLV** torque multipliers.
- **alkitronic® exhaust system** for a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



alkitronic® CLV Remote Systems

Chart:
FBL DUO for two **CLV** torque multipliers

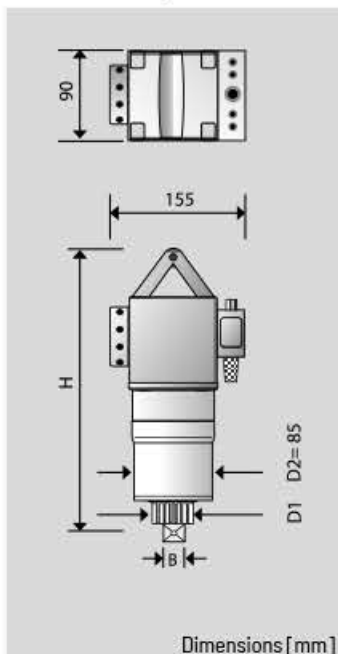
The **FBL QUATTRO** version for four **CLV** torque multipliers more details on request.



Technical data: Models CLV

Type		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.)	D ₁	mm 41	mm 41	mm 41	mm 41	mm 41	mm 41	mm 54	mm 54	mm 54	mm 54
Height (approx.)	L	mm 296	mm 296	mm 296	mm 296	mm 318	mm 318	mm 320	mm 340	mm 372	mm 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.



Specifications

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.

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



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



alkitronic® CLV operating in a preassembly and final assembly workstation. Remote controlled continuous tightening in semi-automatic operation.

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HOME OF TORQUE POWER

alkitronic® products
Made in Germany by

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Development, Production and
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N-Tools

Torque Multipliers for
Mining Trucks



Applications

Pneumatic and electric torque multipliers for continuous rotation by tightening or loosening hard-to-reach, heavy-duty bolted connections, and deep-bed rims of heavy vehicles (mining industry). Torques from 100 Nm up to 3,500 Nm, dependent on type.

Advantages

- Economic, safe operation. **No weather-related costly downtime.**
- **Comfortable to operate.** The motor unit can be rotated 360 degrees. One handed operation with CW/CCW.
- Permanently higher joint quality (compared to impact and hydraulic wrenches) by continuous rotation of the square drive.
- Heavy duty, rugged housing made of cast aluminum. **EA2-N** motor housing made of special polymer: break-proof, and resistant to corrosion.

EFCip-N, Models with protection class IP 54:

- **Low running costs.** Maintenance-free, brushless, synchronous motor.
- **Easy connection** to all international power grids, **no adjustments** necessary.

EA2-N, Li-Ion battery driven 2-speed models with release function:

- **Low weight**, ergonomically designed, low noise emissions.
- **No noise protection** necessary.

CLD-N, pneumatic driven Models:

- Ideal for use in explosion-proof working environment.
- World proven reliable pneumatic drive motor.



alkitronic® specials

EFCip-N: Precise shut-off torque and constant torque accuracy at 100-253V / 45-66 Hz, even when operating on mobile units.

EA2-N with two battery packs ensure up to 360 screw joints in a row.

Pneumatic driven models: **ATEX** approval on request.

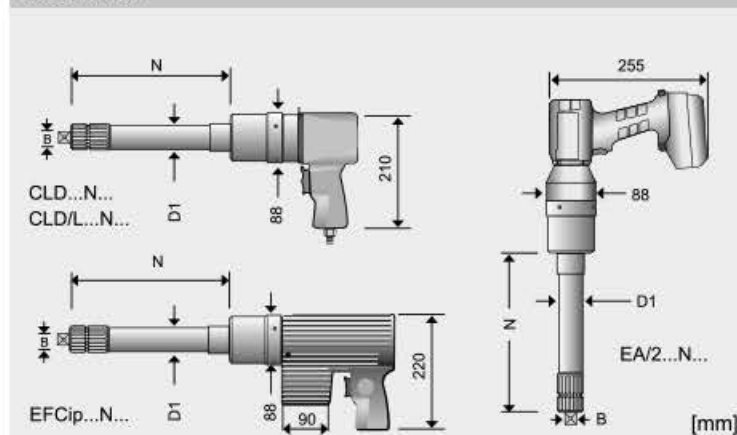
Technical Data

Drive	electric						electric (battery)					pneumatic**				
Model N-Tool (-N)	EFCip30	EFCip40	EFCip50	EFCip60	EFCip65	EA2/80	EA2/100	EA2/150	EA2/200	EA2/280	CLD/L5	CLD/L6	CLD155	CLD225	CLD280	
Torque range* Nm	100-940	150-1450	190-1850	250-2350	290-2900	190-850	130-1100	150-1400	250-2200	300-2800	365-1080	495-1450	600-1700	900-2700	1200-3500	
Square drive B	3/4"	3/4"	1"	1"	1"	3/4"	3/4"	3/4"	1"	1"	3/4"	3/4"	1"	1"	1"	
Diameter (approx.) D ₁ mm	46	46	56	56	56	46	46	46	56	56	46	46	56	56	56	
Length extension N.. inch (e.g. EFCip30 N12)	N 12	N 12	N10 N12 N15 N18	N10 N12 N15 N18	N10 N12 N15 N18	N 12	N 12	N 12	N10 N12 N15 N18	N10 N12 N15 N18	N 12	N 12	N10 N12 N15 N18	N10 N12 N15 N18	N10 N12 N15 N18	
Idle speed 1 st Gear/2 nd Gear rpm	30	15	14	11	8	7 24	6 20	4 13	2 6.5	1.7 6	16	12	7	5	4	

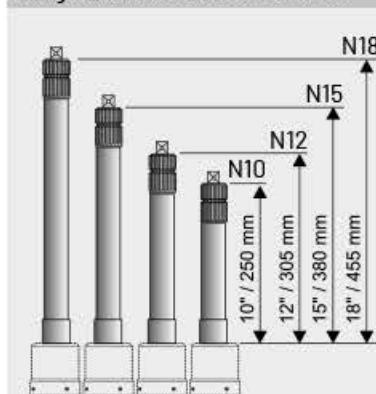
*) When loosening bolts, a higher torque (up to 20 %) may be necessary (release torque). We will gladly advise you in detail.

**) 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.

Dimensions



Length „N“ extension in inch/mm



Examples of product identification:
EA2/200 N10, CLD 155 N12, EFCip 50 N15,
EFCip 50 N18



alkitronic® products
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M-ML & XCE Link

Manual Torque Multiplier



alkitronic® Norwolf specialty products

The **alkitronic® Norwolf Missing Link™**, Model **M-ML** - 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.

M-ML

The **M-ML** torque multiplier fits into **tightly confined areas** where sockets will not fit.

The **M-ML**, has become standard in the wind industry for generator feet and yaw pucks.

Available in 4:1 or 6:1 ratios. It should be emphasized that despite a large gear ratio of 6:1, the **M-ML** offers an ideal 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.



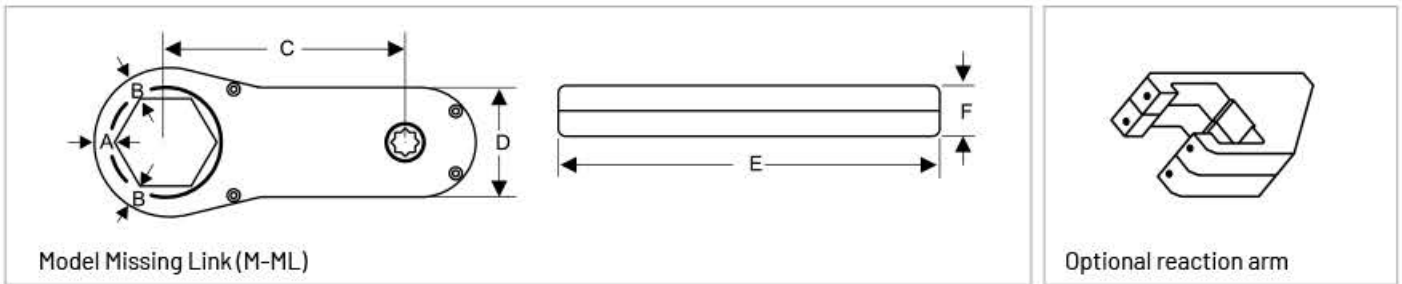
XCE Link™ with hub style to match the input of all **alkitronic®** torque tools. Continuous rotation for use with any electric or pneumatic driven torque multiplier.



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.

Technical Data



Models alkitronic® M-ML 1/2", Ratio 4:1 - max. 340 Nm/250 ft.lbs input to 1,360 Nm/1,000 ft.lbs output

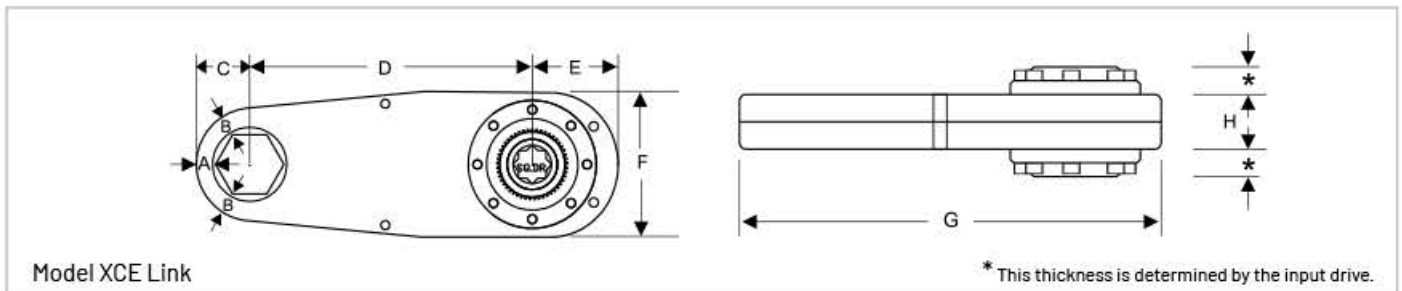
SW / AF	22	24	27	30	32	36	41	46	50	55	60	C	D	F
A mm	13.5	12	11.1	12	11.1	11.1	11.1	11.1	11.1	11.1	11.1	151 mm	70 mm	32 mm
B mm	15.1	13.5	12.7	13.5	12.7	12.7	12.7	12.7	12.7	12.7	12.7			
E mm	222	222	222	226	226	228	231	234	236	239	242			

Models alkitronic® M-ML 3/4", Ratio 4:1 - max. 815 Nm/600 ft.lbs input to 3,260 Nm/2,405 ft.lbs output

SW / AF	22	24	27	30	32	36	41	46	50	55	60	65	70	75	80	C	D	F
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	212 mm	95 mm	45 mm
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			

Models alkitronic® M-ML 3/4", Ratio 6:1 - max. 815 Nm/600 ft.lbs input to 4,890 Nm/3,605 ft.lbs output

SW / AF	32	36	41	46	50	55	60	65	70	C	D	F
A mm	23.3	21.3	18.8	16.3	14.3	14.3	14.3	14.3	14.3	355 mm	102 mm	45 mm
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			



Models alkitronic® XCE Link - 3/4", Ratio 3:1 - max. 1,150 Nm/850 ft.lbs input to 3,450 Nm/2545 ft.lbs output

SW / AF	24	27	32	36	41	46	50	55	60	65	70	75	80	D	E	F	H
A mm	10	11	11	12	12	13	13	14	14	15	15	16	16	156 mm	60 mm	102 mm	38 mm
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				

Models alkitronic® XCE Link - 1", Ratio 3:1 - max. 2,440 Nm/1,800 ft.lbs input to 7,320 Nm/5,400 ft.lbs output

SW / AF	50	55	60	65	70	75	80	90	100	105	110	115	120	D	E	F	H
A mm	13	14	14	15	15	16	16	17	18	19	20	20	21	208 mm	80 mm	137 mm	51 mm
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				

Models alkitronic® XCE Link - 3/4", Ratio 4:1 - max. 1,150 Nm/850 ft.lbs input to 4,600 Nm/3,395 ft.lbs output

SW / AF	24	27	32	36	41	46	50	55	60	65	70	75	80	D	E	F	H
A mm	10	11	11	12	12	13	13	14	14	15	15	16	16	196 mm	60 mm	102 mm	38 mm
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				

Models alkitronic® XCE Link - 1", Ratio 4:1 - max. 2,440 Nm/1,800 ft.lbs input to 9,760 Nm/7,200 ft.lbs output

SW / AF	50	55	60	65	70	75	80	90	100	105	110	115	120	D	E	F	H
A mm	13	14	14	15	15	16	16	17	18	19	20	20	21	262 mm	80 mm	137 mm	51 mm
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				

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M

Manual Torque Multiplier



Kurumsal & Ürünler
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Sipariş & Danışma Hattı
0549 449 3535

Applications

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

Advantages

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

alkitronic® specials

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



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

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

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

Dimensions

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

Specifications

Torque Multiplier input via:
3/4" internal square socket torque wrench or conventional ratchets external hexagonal socket SW 36 mm.

Handwheel - for rough turning loose bolts/nuts.

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

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



alkitronic® - power gear components



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

alkitronic®

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alkitronic® products
Made in Germany by

alki TECHNIK GmbH
Development, Production and
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alkitronic® X H-SERIES

H-AT

Hydraulic Torque Wrench



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Sipariş & Danışma Hattı
0549 449 3535

Application

- **Hydraulic torque wrenches** with two hydraulic hose systems for tightening or loosening heavy bolt connections.
- **alkitronic® H-AT** hydraulic torque wrenches from 80 up to 53,100 ft.lbs (110 up to 72,000 Nm) for threads of M14 and larger.
- **No checking needed:** High repeatability $\pm 3\%$ for the same bolting process.

Advantages

- **Robust and ergonomic:** Hard-wearing, ergonomically shaped housing design made of high strength Aluminium-Titan-Alloy.
- **Simple and low weight:** Easy handling and low weight. Simply replug the square drive from tightening to loosening.
- **Durable and safe:** Bevelled torsion-resistant, highly-loaded one piece design. Higher work-safety due to a advanced and sustainable design.
- **High economic efficiency:** Long operating life, reliable bolting, low maintenance.

alkitronic® specials

- **alkitronic® H-AT** developed for flexible applications in restricted space, ¹ support arm incrementally adjustable (see drawing below).
- **High flexibility:** Convenient, secure and reliable pivoting one-piece joint couplings. Pivotal in two levels (360° horizontally, 180° vertically).
- Robust, rough toothed ratchet for **high torque accuracy**.
- **Solid, precise, especially powerful:** Unique design of the drive pawl.

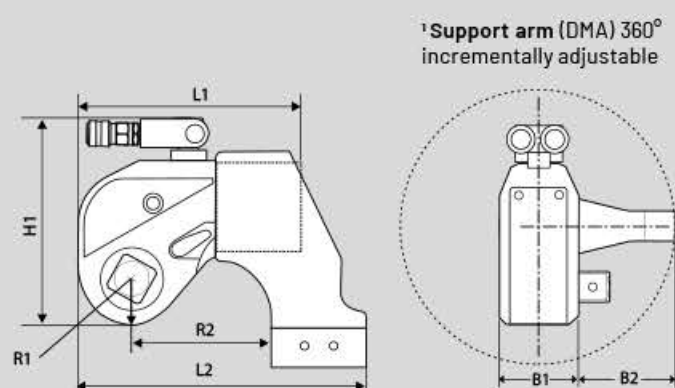


Technical Data

Type		H-AT 1	H-AT 2	H-AT 3	H-AT 5	H-AT 8	H-AT 10	H-AT 20	H-AT 25	H-AT 35	H-AT 50	
Torque range (approx.)	Nm	110-1120	180-1840	450-4510	750-7530	1080-10780	1550-15520	2660-26660	3470-34730	4860-48600	7200-72000	
	ft.lbs	80-826	133-1357	332-3326	553-5554	797-7951	1143-11447	1962-19663	2559-25615	3585-35845	5310-53100	
Square drive size		3/4"	3/4"	1"	1 1/2"	1 1/2"	1 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	
Height	H2	mm	108,1	131	176,5	199	217	232	270	297	332	341
Length	L1	mm	110,8	144,5	178	210,5	222	245,5	307,5	323	372,5	400
Length	L2	mm	139,3	173	229	270,5	293	317,5	383,5	401	496,5	516
Radius	R	mm	20,5	26	34	39	47	51	59	66	77	81
Radius	R2	mm	68,3	85	114	137	153	154	186	199	214	259
Width	B1	mm	42	50	68	80	90	100	120	137	153	160
Width	B2	mm	54	66,5	89,5	100	120	128	153	159,5	167	178
Weight (approx.)	kg	mm	1.8	2.5	5	8	11	15	26.5	35	50	87

Important for the exact reproducibility of the specified torque is a pressure of max. 700 bar. Repeatability $\pm 3\%$. For a fast, safe and reliable operation of the hydraulic wrenches, we recommend our **alkitronic® NOVA** or **alkitronic® VELOX** hydraulic pumps (700 bar pressure, can be used worldwide in all mains grids 100-253 V / 45-66 Hz).

Model alkitronic® H-AT



alkitronic® H-AT
Use in a wind power plant

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H-AX

Hydraulic
Torque Wrench



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Sipariş & Danışma Hattı
0549 449 3535

Applications

- Hydraulic torque wrench with two hydraulic hose system for tightening or loosening heavy bolt connections.
- **alkitronic® H-AX** convertible type torque wrench up to 35,650 ft.lbs (49,000 Nm).
Drive element with interchangeable hexagon link from 14 to 145 mm.

Advantages

- **Simple handling** and low weight.
- **Economic construction** with few single components.
- **High efficiency** with minimum maintenance requirements and low costs.
- **Hard-wearing, ergonomically shaped housing design**, made of high-density aluminium alloy.
- **Highly flexible** due to simple, fast changing of the hexagon links.
Trouble-free support without affecting the torque accuracy by lateral force.

alkitronic® specials

- **Convenient, secure and reliable** individually pivoting joint couplings (360°). Capable of withstanding up to 4x higher maximum operating pressure.
- **Robust ratchet with fine teeth** for high torque accuracy and a max. stroke of 28°.
- **Constructive precise guided drive element.**
- **alkitronic® H-AX** developed for applications in restricted space and difficult to access areas: **Drive element and hexagon link** in line, **extremely flat** and flush design.



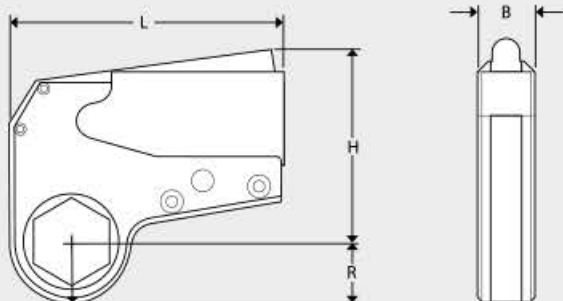
Technical Data

Type		H-AX 1	H-AX 2	H-AX 4	H-AX 8	H-AX 16	H-AX 32 ***
Torque range (approx.) *	Nm	60-770	260-2600	540-5400	1150-11900	2150-22900	4450-49000
	ft.lbs	45-560	192-1928	395-3950	830-8630	1560-16600	3220-35650
Hexagon	AF ** mm	14-32	27-55	36-70	55-95	80-115	95-145
Radius (approx.) from-to	R mm	19-25	26-42	34-52	46-79	63-87	82-109
Width	B mm	24	38	47	58	70	92
Length	L mm	111	167	203	253	330	390
Height	H mm	83	103	144	180	194	278
Weight (approx.)	kg	0.5	1.6	3.5	6.6	13	18

*) When loosening a bolted connection, up to 20% higher torque may be required (loosening torque). We will gladly advise you in detail.
Ask us about: **) other AF sizes ***)) models with larger torque range.

Important for the exact reproducibility of the specified torque is a pressure of max. 700 bar. Repeatability $\pm 3\%$. For a fast, safe and reliable operation of the hydraulic torque wrenches we recommend our **alkitronic® NOVA** or **alkitronic® VELOX** hydraulic pumps (700 bar pressure, can be used worldwide in all mains grids 100-253 V / 45-66 Hz).

Model **alkitronic® H-AX**



alkitronic® H-AX, when fitting a flange in plant construction.

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X Driver Systems

Hydraulic Wrenches



X Driver Hydraulic Wrench System

The **alkitronic®** Norwolf X DRIVER SYSTEM - the most revolutionary hydraulic torque wrench system ever created. The profiles are totally flat with no extrusions that create hangups. The design with a smaller cylinder bore but longer levers, creates less stress on all parts. Easier to get into confined areas and around nuts in hard to access spaces. With the durability of solid steel design, fewer parts, and clean-lined construction.

X Driver

- Hydraulic power head with two hydraulic hose system.
- Slimmest design - one piece piston construction.
- Only one high pressure o-ring - easily changed with four bolts.
- Novel swivel design - 360° or 360 x 360 with one piece add on.
- The power head locks into the separate drives without pins or screws.
- All alloy steel construction - only true convertible tool.
- Ready for optional handle.

A Drive (hex link)

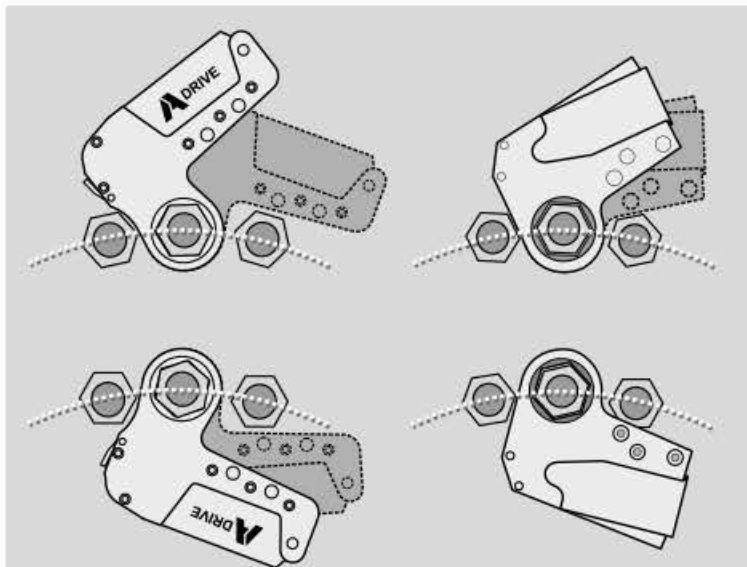
- Slimmest design - no loose shroud - totally enclosed.
- Reaction arm/pad ready with 2 pin holes.
- Patented reaction pawl easily disengaged with screw.
- Fewer parts. Other hex links have many moving parts, increasing breakdowns and need for complex repairs.
- Deepest reach on the market - fits all flanges.
- Upon testing, the A-Drive is 10-50% faster than other hydraulic wrenches.

V Drive (square drive)

- Push through drive with ball locks.
- Fastest 40° stroke making tool up to 30% faster per stroke.
- Most versatile, patented reaction arm. Arm never needs to come off tool for resetting, unlike competitors. Adjusts in all directions with posi lock locator buttons. Totally unique design.
- Thinnest width square drive tool on the market - totally enclosed.
- Optional solid reaction arm available.

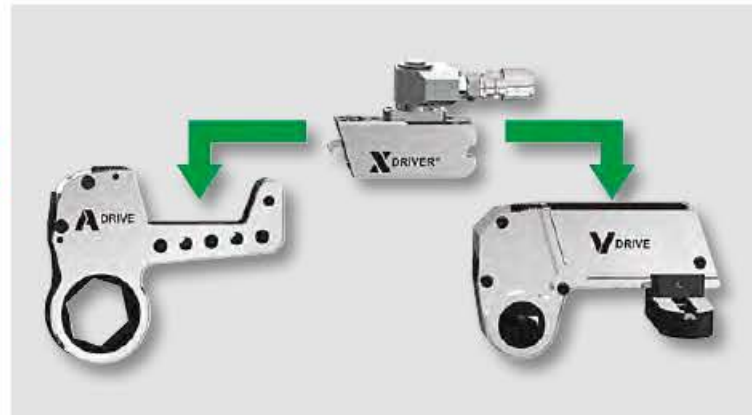
Specifications

A prerequisite for exact reproducibility of the specified torque ranges is an operating pressure of 100 to 700 bar. Repeatability +/- 3%.



A-Drive and X-Drive fits more applications than any other wrench.

The patented design curve creates the longest throat reach, allowing the widest approach angle to fit the tool on the nut, easily, without jogging or manually moving the ratchet. This curve makes the X-Drive the fastest to fit in the industry, on both in-line and inverted applications.



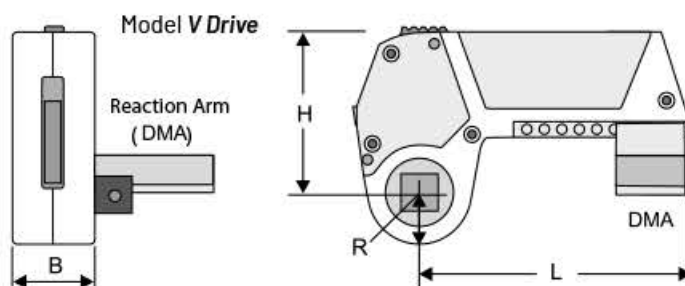
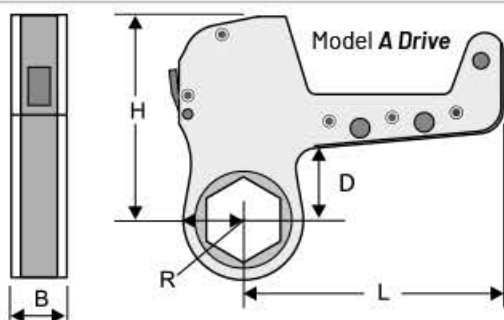
The hydraulic wrench is so advanced it's not only a tool, it's an entire system. The X-Drive locks into drives which fully protect the cylinder from reaction points. The X-Drive pivots inside the drives, in-line, to prevent side load and tension to the cylinder, for safety and endurance.



Application Example: A-Drive when fitting a flange coupling in plant construction.

Hands-Free a Drive Safety: The catch lever holds the tool against the reaction point on the piston retract, preventing the operator from holding the tool against the reaction area during tool kick-back on the retract stroke.

Technical Data



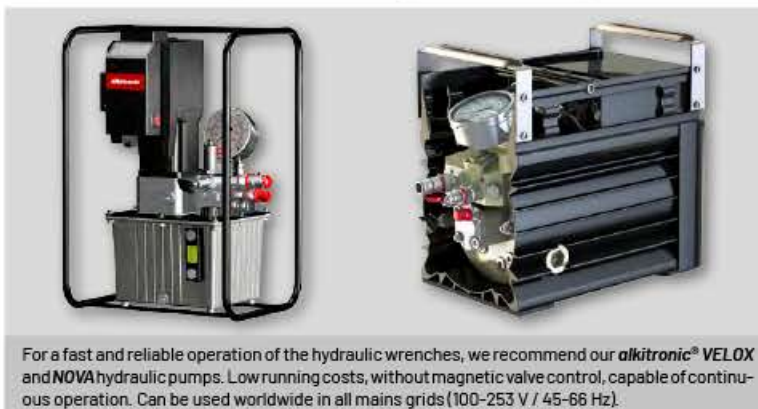
Models A Drive (Hex. link)

A Drive + X Driver	Type	A - 2	A - 4	A - 8	A - 16	A - 32	A - 64		
Torque range *	Nm	335-2240	805-5370	1560-10400	2690-17920	6600-44000	12450-83000		
Torque range *	ft.lbs	247-1652	594-3961	1151-7671	1984-13217	4868-32453	9183-61217		
Height	H mm	104	139	174	208	278	347		
Length	L mm	134	178	223	267	356	446		
Distance	D mm	38	51	63	76	102	127		
Width	B mm	29	38	48	57	76	95		
Weight (approx.)	kg / lbs	2.3 / 5.0	5.0 / 11.0	10.5 / 23.5	17.0 / 37.5	33.0 / 72.5	76.0 / 167.0		
Type A 2-		SW 27	SW 32	SW 36	SW 41	SW 46	SW 50	SW 55	SW 60
Radius (approx.)	R mm	25	28	31	33	36	39	42	45
Type A 4-		SW 46	SW 50	SW 55	SW 60	SW 65	SW 70	SW 75	SW 80
Radius (approx.)	R mm	39	42	45	48	50	53	56	58
Type A 8-		SW 55	SW 60	SW 65	SW 70	SW 75	SW 80	SW 90	SW 100
Radius (approx.)	R mm	49	53	56	59	63	66	70	73
Type A 16-		SW 70	SW 75	SW 80	SW 90	SW 100	SW 105	SW 115	SW 125
Radius (approx.)	R mm	61	62	65	70	75	81	87	93
Type A 32-		SW 90	SW 100	SW 105	SW 115	SW 125	SW 135	SW 145	SW 155
Radius (approx.)	R mm	77	82	88	93	99	104	110	115
Type A 64-		SW 125	SW 135	SW 145	SW 155	SW 165	SW 175	SW 185	SW 195
Radius (approx.)	R mm	105	111	116	122	127	133	138	144

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

Models V Drive (Square drive)

V Drive + X-Driver	Type	V - 2	V - 4	V - 8	V - 16	V - 32	V - 64
Torque range *	Nm	265-1760	625-4174	1225-8155	2115-14100	5015-33420	9790-65280
Torque range *	ft.lbs	195-1298	461-3079	904-6015	1560-10400	3699-24649	7221-48148
Square drive		3/4"	1"	1 1/2"	1 1/2"	2 1/2"	2 1/2"
Height	H mm	83	111	139	166	222	277
Length (approx.)	L mm	140	190	240	290	390	490
Radius	R mm	25	34	42	51	68	85
Width	B mm	41	55	69	83	110	138
Weight (approx.)	kg / lbs	2.7 / 5.9	6.1 / 13.5	12.0 / 26.5	20.7 / 45.5	43.0 / 94.5	86.0 / 189.0



For a fast and reliable operation of the hydraulic wrenches, we recommend our **alkitronic® VELOX** and **NOVA** hydraulic pumps. Low running costs, without magnetic valve control, capable of continuous operation. Can be used worldwide in all mains grids (100-253 V / 45-66 Hz).

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VELOX

Electric Hydraulic Pump



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Applications

- alkitronic® VELOX is a robust, long-life quality product made in Germany.
- This unique electrical hydraulic pump (protection class IP65) is protected against rain, splash water and dust deposit to eliminate costly downtime.
 - Its suitable for 110V or 230V main grids and voltage- controlled mobile power units.

Advantages

- **High precision** ($\pm 3\%$) through all pressure ranges, defined by precisely adapted oil flow rate.
- **Air cooling, robust design, low weight.** The housing design ensures optimum heat dissipation.
- **Simple operating: one-push-button remote control** for ergonomic, working convenience and distance safety.
- **High working speed and short set-up times.** Can connect two hydraulic torque tools to increase productivity and to save time and money.
- **Flexible bolting applications.** Compatible with almost all hydraulic torque wrenches, regardless of cylinder size and torque range.

alkitronic® specials

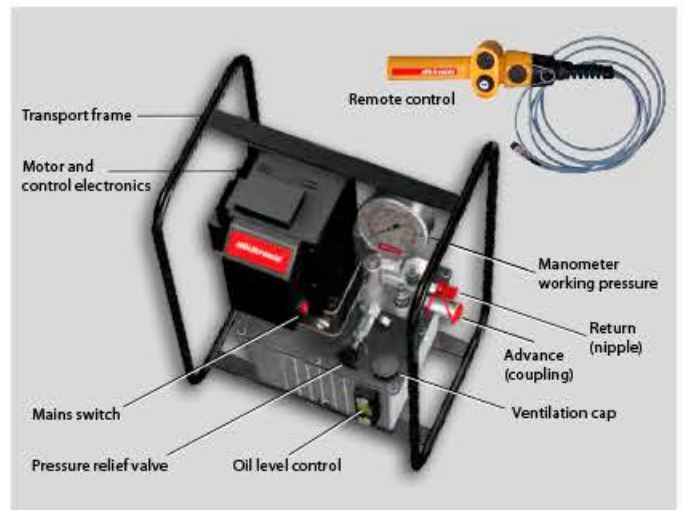
- **Low maintenance costs** due to the maintenance-free, low-wear and brushless synchronous motor. No magnetic control valves and therefore no wear.
- **Modular construction** for cost-saving upgrade or parts exchange.
- **Individual operation** - basic version with manual control.
- **Integrated motor protection** to avoid damage due to overload.



Technical Data

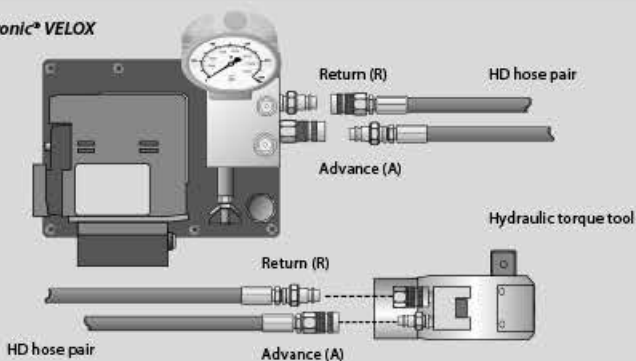
alkitronic® VELOX infinitely adjustable pressure setting up to 700 bar (maximum operating pressure: 700 bar)

Specification	alkitronic® VELOX	VELOX Speed Upgrade
Drive electrical / nominal sensitivity	110/230V, 50/60 Hz, 1600W	230V, 50/60 Hz, 2100W
Protection class	IP65	IP65
Output low pressure area	6 l/min up to 140 bar	8,5 l/min up to 140 bar
Output high pressure area	0,75 l/min up to 700 bar	1,15 l/min up to 700 bar
Tank capacity	4,0 l	4,0 l
Surrounding temperature	-20 °C up to +50 °C	-20 °C up to +50 °C
Noise emission	< 76 dB(A)	< 76 dB(A)
Weight incl. oil	24 kg	24 kg
Dimensions L x W x H (mm)	360 x 260 x 560	360 x 260 x 560
Dimensions L x W x H (mm) with transport frame	390 x 310 x 570	390 x 310 x 570



Compatible: Diagram of hydraulic hose connection

alkitronic® VELOX



Included in the delivery: hydraulic hoses, 5 m long (DN 6)

Hydraulic torque wrench alkitronic® AT



We recommend our hydraulic torque wrenches for secure and reliable tightening or loosening of heavy bolt connections.

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Applications

- The **alkitronic® LEVA** is a robust, powerful, electric driven hydraulic pump.
- **Small, low weight, reliable** - ideal for service use.
- **Simple operation**, continuously adjustable up to 700 bar.
- **Trouble-free operation on the 230 V main grids** as well as on voltage-controlled mobile generators.

Advantages

- **Flexible bolting applications:** Compatible with almost all hydraulic torque wrenches, regardless of cylinder size and torque range.
- **High precision through all pressure ranges**, defined by precisely adapted oil flow rate.
- **Simple operating remote control for ergonomic working.** 2-button operation for start / advance stroke with automatic return stroke and stop function.
- **Rapid pressure relief** of the system via a manual solenoid valve.
- Pump design with **very low heat generation**. Oil level control with continuous analog temperature display.

alkitronic® specials

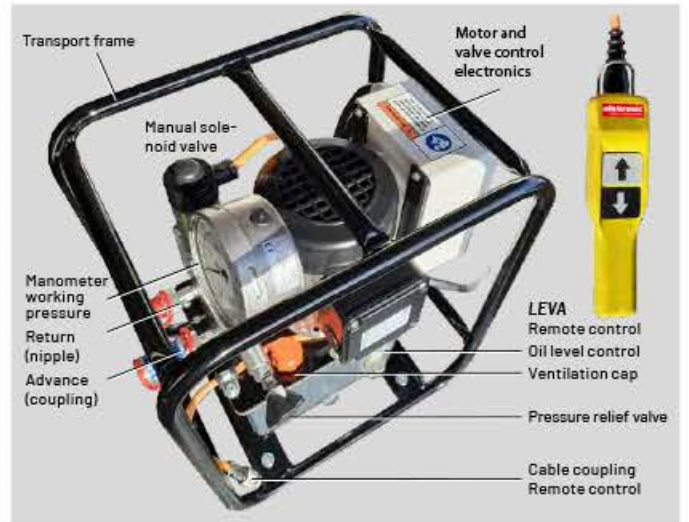
- Modular, clear assembly structure for **cost-saving parts exchange**.
- Sturdy profile frame for **stability and transport security**.
- **Significant increase in efficiency** thanks to extremely short training period.



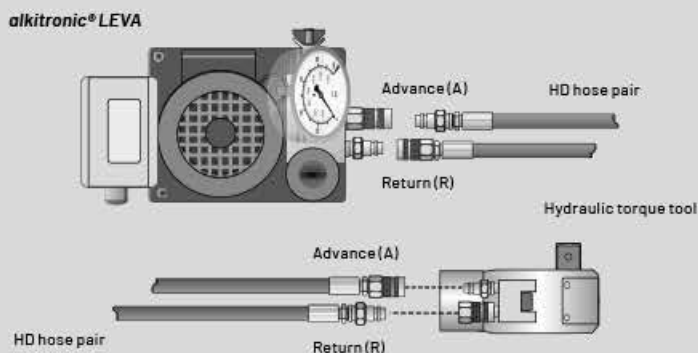
Technical Data

alkitronic® LEVA infinitely adjustable pressure setting up to 700 bar (maximum operating pressure: 700 bar).

Description	alkitronic® LEVA
Drive electrical, nominal sensitivity	230 V / 50 Hz, 250 W
Protection class	IP20
Output low pressure area	3.2 l/min < 75 bar
Output medium pressure area	0.9 l/min at 75 to 220 bar
Output high pressure area	0.4 l/min to 700 bar
Tank capacity	1.8 l
Surrounding temperature (use and storage)	-10 °C up to +40 °C
Noise emission	82 dB(A)
Weight exclusive oil with transport frame	approx. 18.4 kg
Dimensions with transport frame (L x W x H)	330 x 250 x 410 mm



Compatible: Diagram of hydraulic hose connection



Included in the delivery:
Remote control, transport frame, hydraulic oil, instruction manual

alkitronic® AT Hydraulic Torque Wrench



We recommend our hydraulic torque wrenches for secure and reliable tightening or loosening of heavy bolt connections.

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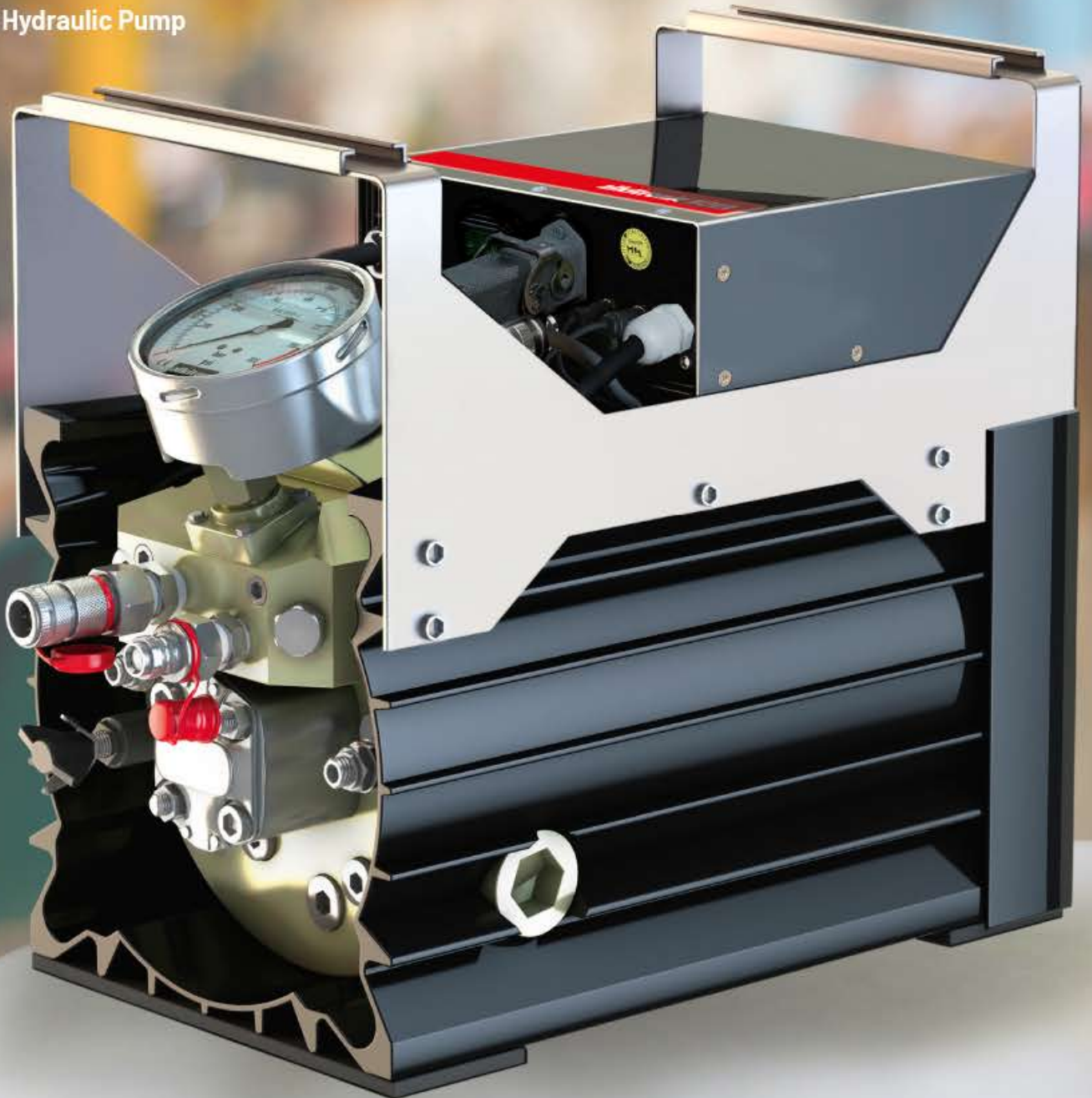
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www.alkitronic.com

havasis

alkitronic® X H-SERIES

NOVA

Electric Hydraulic Pump



Kurumsal & Ürünler
havasis.com.tr



Sipariş & Danışma Hattı
0549 449 3535

Applications

Electric driven hydraulic pump, usable worldwide 100-253 V / 45-66 Hz, up to 700 bar / 10,000 psi for hydraulic wrenches with single or double-acting cylinders.

- Duo- or Quattro version (for 2 or 4 wrenches etc.) optional.
- Robust compact design for use on the roughest construction sites.

Advantages

- **Huge oil flow** due to intelligent electronic controlling, powerful motor.
- Easiest automatic operation for **all cylinder sizes** without any manual presetting.
- Ergonomic remote control for manual or automatic operation.

alkitronic® specials

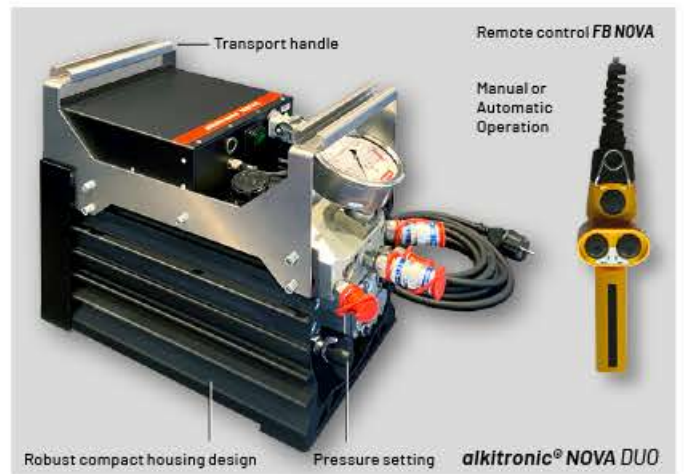
- **No magnetic valve control**
Powerful but gentle changeover from power stroke to idle stroke, due to direction switch of the drive motor, which guarantees high durability of the equipment.
- **Capable of continuous operation – minimal heat generation**
No oil overheating by the innovative motor drive in combination with the automatic mode. The automatic operation only provides the flow supply with the working pressure necessary for efficient bolting.
- **Low running costs**
Brush-free synchronized motor, maintenance-free and low wear. Usable on all international mains supply without any change.



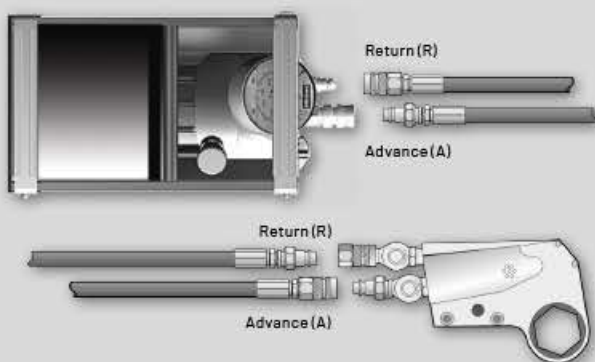
Technical Data

alkitronic® NOVA with infinitely adjustable pressure setting up to 700 bar / 10,000 psi (700 bar / 10,000 psi max. pressure).

Designation	alkitronic® NOVA
Drive electrical	100-253 V / 45-66 Hz
Nominal capacity	3500 W max.
Oil flow:	
low pressure	15 l/min up to 70 bar
medium pressure	10 l/min up to 180 bar
high pressure	1.5 l/min up to 700 bar
Weight including oil	28,5 kg
Dimensions L x W x H (mm)	350 x 220 x 300
Surrounding temperature	-20 °C up to +50 °C



Connection scheme hydraulic hoses



Delivery range: High pressure hoses (DN 8), Length 5m

alkitronic® NOVA multibox



Robust design with load hooks and handles, certified for crane transportation.

alkitronic®
HOME OF TORQUE POWER

alkitronic® products
Made in Germany by
alki TECHNIK GmbH
Development, Production and
Distribution of Bolting Systems

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85051 Ingolstadt
Germany

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Product News

pneumatic Hydraulic Pump LHP2

Applications

- The **alkitronic® LHP2** is a robust, powerful, pneumatic driven hydraulic pump.
- **Perfectly for use in explosion risk areas.** Optional with ATEX-Certification: II2 GDcT4 version.
- **Simple operation** and infinitely adjustable pressure setting up to 700 bar.
- **Ideal working conditions** with an air pressure of 7 bar and a flow rate of 2,100 l/min or 3,800 l/min (LHP2 quattro).

Advantages

- High working speed and short set-up times. **Connection of up to four hydraulic torque tools** is possible. This increases productivity and saves time and money.
- Flexible bolting applications. **Compatible with nearly all hydraulic torque wrenches**, independent of cylinder size and torque range.
- **High precision** ($\pm 3\%$) through all pressure ranges by precisely adapted oil flow rates.
- **Safe and simple remote control** of the forward and return stroke.

alkitronic® specials

- Modular, clear assembly structure for a **cost-saving parts exchange**.
- **Low operating costs** thanks to maintenance-free and low-wear operation.
- Sturdy profile frame with tool box for **stability and transport security**.
- **Integrated silencer** minimize health hazards at work.



Technical Data

alkitronic® LHP2 infinitely adjustable pressure setting up to 700 bar (maximum operating pressure: 700 bar).

Description	alkitronic® LHP2	LHP2 quattro
Driving power, pneumatic motor	1.9 kW	3.0 kW
Output low pressure area	8.5 l/min at 80 bar	10.5 l/min at 70 bar
Output high pressure area	0.77 l/min at 700 bar	1.0 l/min at 700 bar
Tank capacity	approx. 10 l	
Surrounding temperature (use and storage)	-20° C up to +50° C	
Noise emission	76 dB(A)	
Weight exclusive oil with transport frame	approx. 25 kg	
Air consumption	2,100 l/min at 7 bar (74 ft³/min)	3,800 l/min at 7 bar (134 ft³/min)
Dimensions with transport frame (L x W x H)	530 x 310 x 566 mm	

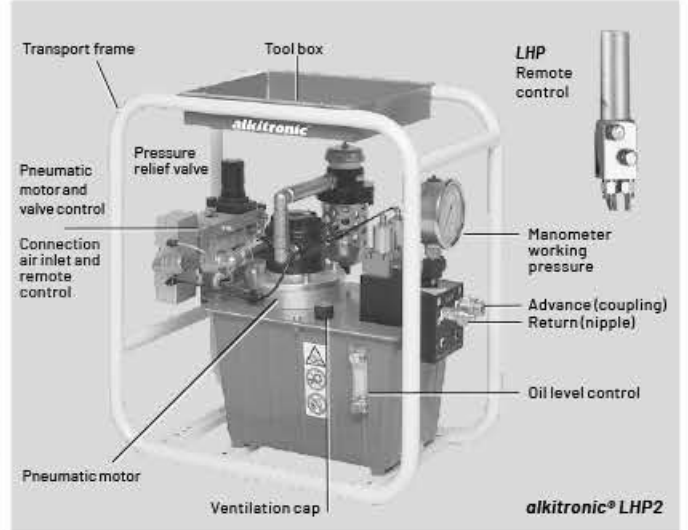
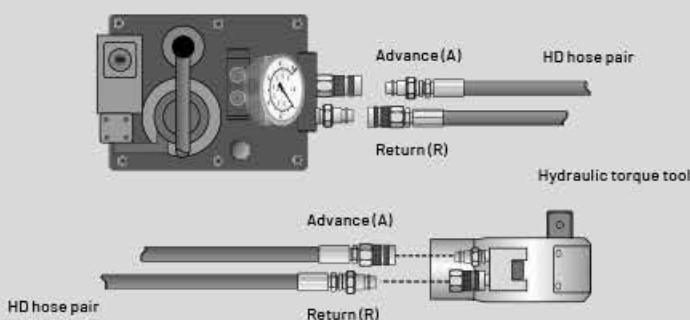


Diagram of hydraulic hose connection (one wrench example)

alkitronic® LHP2



Included in the delivery:
Remote control, transport and security frame, hydraulic oil, instruction manual.

alkitronic® AT Hydraulic Torque Wrench



We recommend our hydraulic torque wrenches for secure and reliable tightening or loosening of heavy bolt connections.

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Made in Germany by

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Flange Boy

The ideal aid for separating
piping flanges



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.

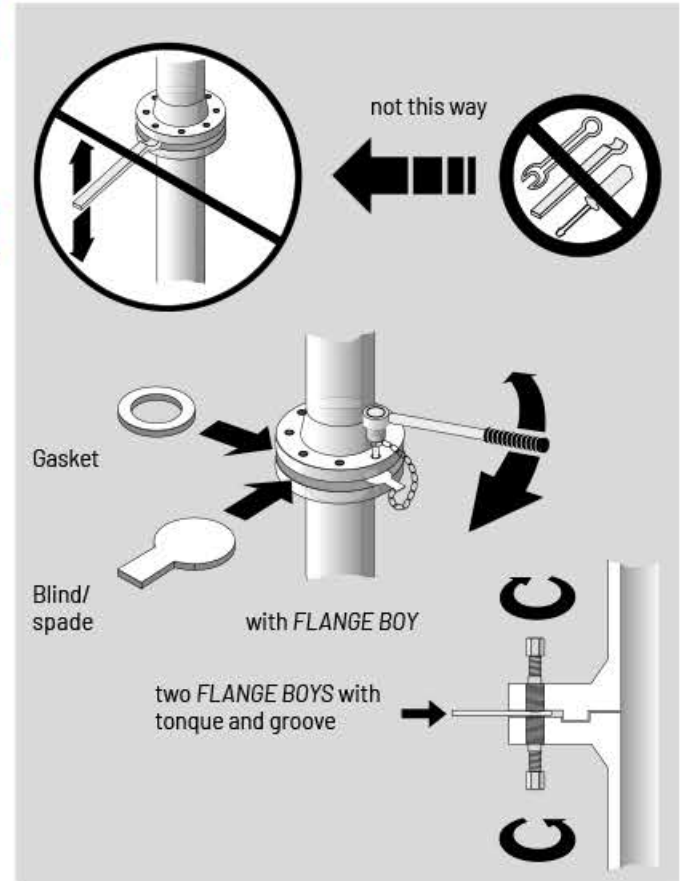
You will, thus, be able to apply heavy loads without risking damage to the support plate. Due to the flange proportions, it is not possible to increase the thickness of the support plate.

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!



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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www.alkitronic.com

DBP Nr. 2522817 • US Patent No. 4015324

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

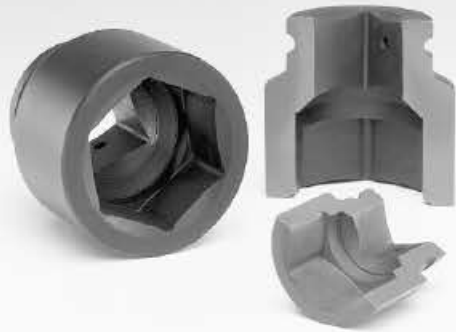
Standard Zubehör Accessories





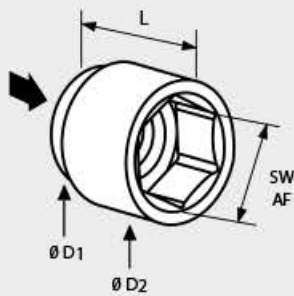
Solutions that fit your needs

alkitronic® STACO

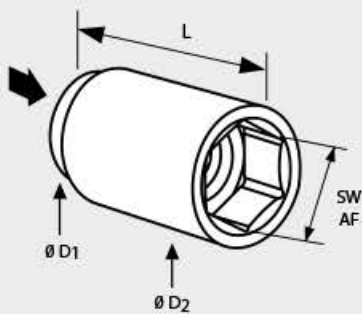
6-Kant-Standardnuss / Hex. standard sockets



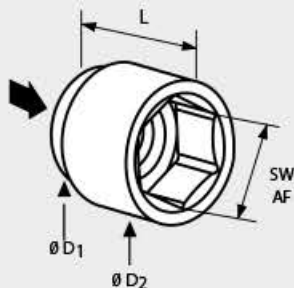
		Gummiring / Rubber Ring 	Stift / Pin 
Abtriebsvierkant / Square Drive		Bestell-Nr. / Order No.	Bestell-Nr. / Order No.
Staco	3/4"	31620	31621
Staco-L	3/4"		
Staco	1"	31520	31521
Staco-L	1"		
Staco-K	1 1/2"	31420	31421
Staco-L	1 1/2"		
Staco	2 1/2"	31425	31426



alkitronic® ➔ D1	STACO 3/4"				STACO 1"				STACO 1 1/2"			
	44 mm				54 mm				85 mm			
	SW ¹⁾	D ₂ ²⁾	L	No.	SW ¹⁾	D ₂ ²⁾	L	No.	SW ¹⁾	D ₂ ²⁾	L	No.
17	31	60	31601	19	37	82	31561	36	63	90	31471	
19	33	60	31602	22	40	82	31562	41	69	90	31472	
22	37	60	31603	24	43	82	31563	46	76	90	31473	
24	39	60	31604	27	45	82	31564	50	80	90	31474	
27	43	60	31605	30	46	82	31565	55	88	90	31475	
30	47	60	31606	32	52	82	31566	60	94	90	31476	
32	49	60	31607	36	56	82	31567					
36	54	60	31608	41	64	82	31568					
41	61	60	31609	46	70	82	31569					
46	67	60	31610	50	76	82	31570					
				55	85	82	31512					
				60	87	82	31513					
				65	92	82	31514					



alkitronic® ➔ D1	STACO-L 3/4"				STACO-L 1"				STACO-L 1 1/2"			
	44 mm				54 mm				85 mm			
	SW ¹⁾	D ₂ ²⁾	L	No.	SW ¹⁾	D ₂ ²⁾	L	No.	SW ¹⁾	D ₂ ²⁾	L	No.
17	31	100	31631	22	40	110	31531	36	63	110	31451	
19	33	100	31632	24	43	110	31532	41	69	110	31452	
22	37	100	31633	27	45	110	31533	46	76	110	31453	
24	39	100	31634	30	46	110	31534	50	80	110	31454	
27	43	100	31635	32	52	110	31535	55	88	110	31455	
30	47	100	31636	36	56	110	31536	60	94	110	31456	
32	49	100	31637	41	64	110	31537	65	99	110	31457	
36	54	100	31638	46	70	110	31538	70	107	110	31408	
41	61	100	31639	50	76	110	31539	75	113	110	31409	
46	67	100	31640	55	85	110	31540	80	119	116	31410	
				60	87	110	31541	85	125	121	31411	
				65	92	110	31542	90	132	127	31412	
								95	138	127	31413	



alkitronic® ➔ D1	STACO 2 1/2"				STACO 2 1/2"			
	127 mm				140 mm			
	SW ¹⁾	D ₂ ²⁾	L	No.	SW ¹⁾	D ₂ ²⁾	L	No.
65	106	138	31921	120	175	175	31932	
70	113	140	31922	125	181	175	31933	
75	119	143	31923	130	188	180	31934	
80	125	150	31924	135	194	180	31935	
85	132	155	31925	140	200	185	31936	
90	138	160	31926	145	206	185	31937	
95	144	160	31927	150	213	190	31938	
100	150	165	31928	155	219	200	31939	
105	156	165	31929	160	225	205	31940	
110	163	170	31930	165	231	205	31941	
115	169	175	31931	170	238	210	31942	

1) SW in mm / AF in mm; 2) ungefähre Maße in mm; approximate dimensions in mm

alkitronic® STABI

Standardverbinder / Standard connector



Stift/Pin

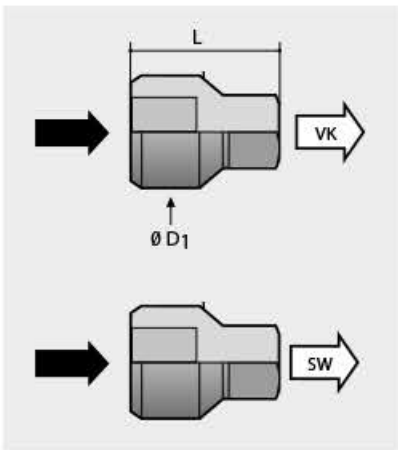
Gummiring/
Rubber ring



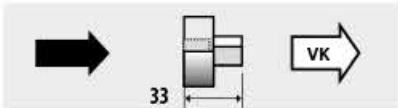
Standard Verbinder/connector -H/-S



Baugruppe / Assembly



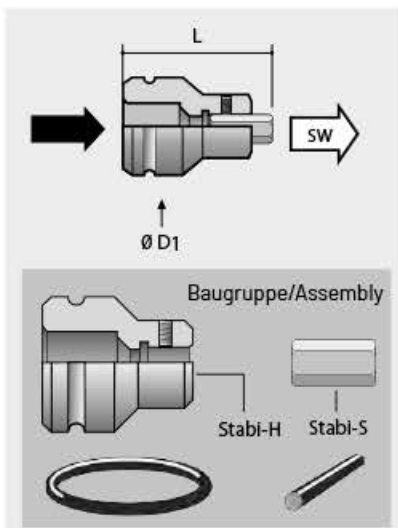
alkitronic®	STABI 3/4"		STABI 1"		STABI 1 1/2"		STABI 2 1/2"	
	D1	L	D1	L	D1	L	D1	L
	50 mm	75 mm	60 mm	75 mm	78 mm	105 mm	127 mm	156 mm
	VK □	No.	VK □	No.	VK □	No.	VK □	No.
	1/2"	31305	3/4"	31205	1"	31105	1 1/2"	31101
	1"	31307	1 1/2"	31207	2 1/2"	31107		
	SW¹ ○	No.	SW¹ ○	No.	SW¹ ○	No.		
	17	31312	24	31213	24	31112		
	19	31313	27	31214	27	31113		
	22	31314	30	31215	30	31114		
	24	31315	32	31216	32	31115		
					36	31116		



Verbinder / Connector* in	out	Bestell-Nr. / Order No.
1/2"	VK □ 3/4"	31357-K

* nur für Modell alkitronic® M-HG / only for model alkitronic® M-HG

alkitronic® STABI-HALTER/STABI-STIFT Standardverbinder-H/-S / Standard connector-H/-S (Baugruppe / Assembly)

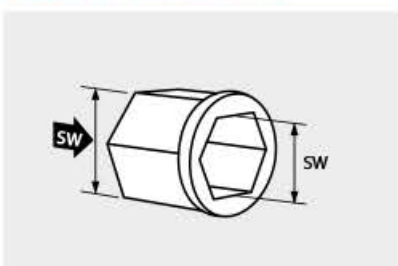


alkitronic®	STABI-H / STABI-S			STABI-H / STABI-S			STABI-H / STABI-S		
	Gummiring / Rubber Ring Stift / Pin			Gummiring / Rubber Ring Stift / Pin			Gummiring / Rubber Ring Stift / Pin		
	3/4"			1"			1 1/2"		
Ø D1	48 mm			54 mm			85 mm		
	SW¹	L	BG. No.**	SW¹	L	BG. No.**	SW¹	L	BG. No.**
	12	76	31001	17	85	31008	19	105	31015
	14	76	31002	19	85	31009	22	105	31016
	17	76	31003	22	85	31010	24	105	31017
	19	76	31004	24	87	31011	27	105	31018
	22	76	31005	27	87	31012	30	105	31019
	24	76	31006	30	87	31013	32	105	31020
				32	89	31014	36	108	31021
							41	120	31022
							46	122	31023

** BG (Baugruppe/Assembly)

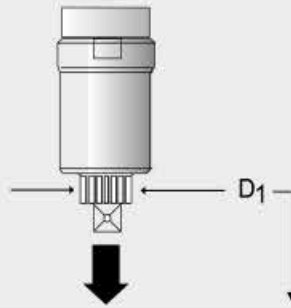
alkitronic® STA

Standardadapter / Standard adaptor



alkitronic®	STA 36 mm		STA 46 mm		STA 55 mm		STA 65 mm		STA 70 mm		STA 80 mm		STA 105 mm	
	SW¹	No.	SW¹	No.	SW¹	No.	SW¹	No.	SW¹	No.	SW¹	No.	SW¹	No.
	24	31705	36	31701	36	31711	36	31721	36	31731	46	31741	80	31861
	27	31706	41	31702	41	31712	41	31722	41	31732	50	31742	85	31863
	30	31707			46	31713	46	31723	46	31733	55	31743	95	31862
	32	31708					50	31724	50	31734	60	31744		
							55	31725	55	31735	65	31745		
							60	31736	60	31736	70	31746		

1) SW in mm / AF in mm; 2) ungefähre Maße in mm; approximate dimensions in mm

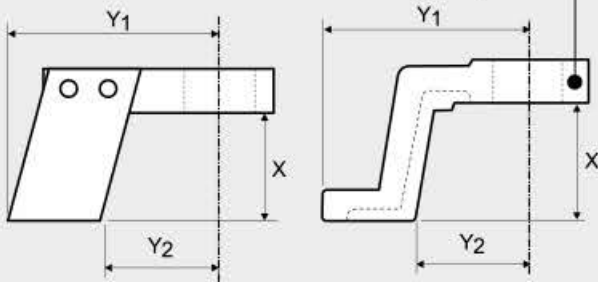


▼ Bestell-Nr. / Order No.

Abstützfuß / Reaction foot

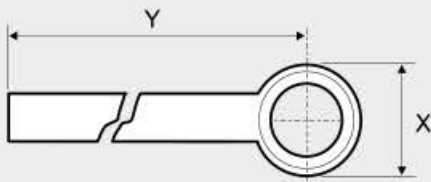
DMA 10231
DMA 10232

Sicherungsschraube (optional)
Security bolt (optional)



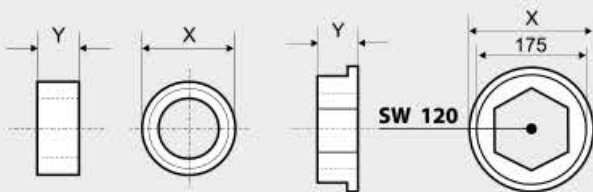
Abtriebsvierkant Square drive	mm				DMA No.
	D1	X	Y1	Y2	
3/4"	41	74	75	51	10231
3/4"	41	128	75	51	10232
3/4"	41	65	120	70	10251
3/4"	54	83	130	85	10252
1" (*)	54	83	150	85	10253
1", 1 1/2"	72	85	194	110	10234
1 1/2"	72	123	220	120	10256
1 1/2"	91	123	220	120	10257

Gegenhalter / Toward support



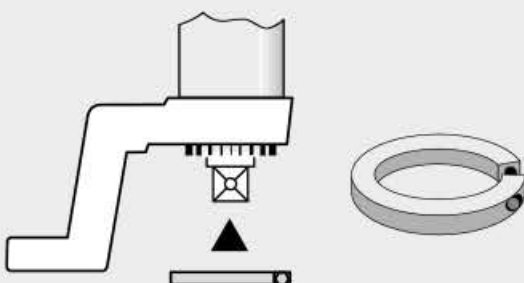
	D1	X	Y	DMA No.
3/4"	41	65	210	10261
1"	54	80	240	10262
1 1/2"	72	105	240	10265
1 1/2"	91	105	240	10267

Abstützring / Reaction ring



	D1	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

Sicherungsring / Security ring



	D1	DMAR No.
	41	10271
	54	10272
	72	10275
	91	10277

(* Für Drehmomente über 2000 Nm empfehlen wir: DMA 10253 /
For torques higher than 2000 Nm we recommend you use: DMA 10253

(** DMA 10254 (Aluminium-Legierung) für Drehmomente < 3500 Nm /
DMA 10254 (Aluminium alloy) for torques < 3500 Nm

alkitronic® Drehmomentschlüssel / Torque wrench



Drehmomentschlüssel

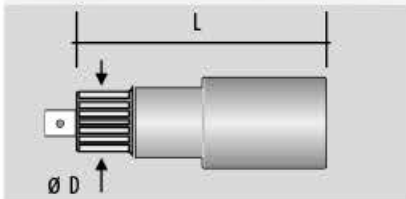
mit automatisch auslösendem akustischem Signal, eingebauter Knarre mit kleinem Nachholwinkel und einfacher sicherer Einstellung des Drehmomentwertes. Bei Verwendung als Antriebselement für unsere **alkitronic® M** - Handkraftschrauber, werden Drehmomente bis 50.000 Nm sicher und schnell beherrscht.

Torque wrench

makes an audible click when preset torque load is reached. Equipped with a ratchet. Easy and accurate torque setting. Suitable for use with our **alkitronic® M** - multiplier driver; torque output up to 50,000 Nm; robust and quick operation.

Abtriebsvierkant Square Drive	Messbereich Span	Teilstrich- skala Scale	Länge Length	Gewicht Weight	Bestell-Nr. Order No.
	Nm	Nm	mm	kg	
3/4"	40-280		691	1,900	31352
3/4"	60-420		965	3,300	31353
3/4"	100-700		1314	6,200	31354
1"	100-1000		1538	9,800	31361

Auszug Sonderzubehör / Some special accessories



ATV - Abtriebsverlängerung / Square drive extension

Abtriebsverlängerung Square drive extension	Ø D	Länge Length	Bestell-Nr. Order No.
ATV	mm	L (mm/in)	
3/4"	41	254 / 10"	10286
1"	54	229 / 9"	10278
1"	54	305 / 12"	10279



Aufhänger mit Öse u. Griff / Hanging device with handle and eyebolt

Aufhänger/Hanging device (Ø in mm)	85	88	93	98	109	132
Bestell-Nr. / Order No.	10124	10125	10126	10123	10122	10120

havasis

alkitronic® X A-SERIES

Hydraulik Zubehör Hydraulic Accessories

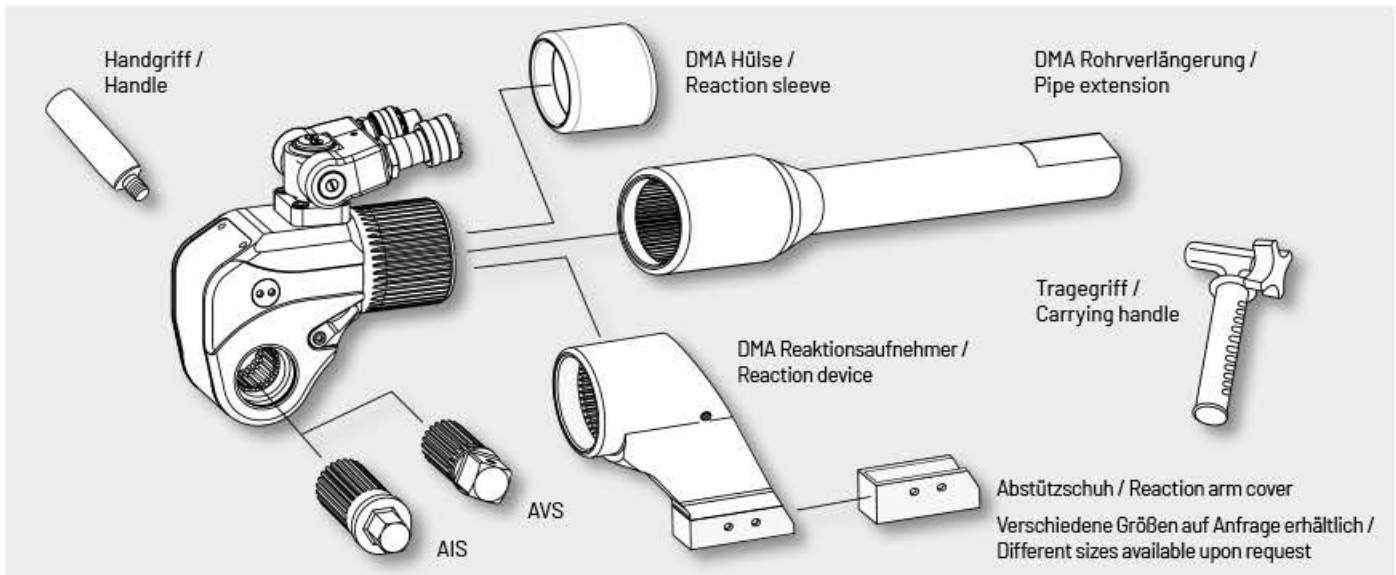


Kurumsal & Ürünler
havasis.com.tr



Sipariş & Danışma Hattı
0549 449 3535

alkitronic® AT Zubehör / Accessories



alkitronic® AT Reaktionsaufnahme / Reaction device (DMA)

DMA Rohrverlängerung / Pipe extension		DMA Hülse / Reaction sleeve		DMA Reaktionsaufnahme / Reaction device		
alkitronic®	No.	alkitronic®	No.	alkitronic®	No.	
	AT 2	77123		AT 2	77157	
	AT 3	77128		AT 3	77158	
	AT 5	77132		AT 5	77159	
	AT 8	77137		AT 8	77160	
	AT 10	77141		AT 10	77161	
	AT 20	77142				
					AT 1	77101
					AT 3	77102
					AT 5	77103
					AT 8	77104
					AT 10	77105
					AT 25	77106

alkitronic® AIS Inbusstift / Allen pin

	AIS-AT 1-		AIS-AT 2-		AIS-AT 3-	
	SW ¹	No.	SW ¹	No.	SW ¹	No.
	17	76501	17	76301	17	76401
	19	76502	19	76302	19	76402
	22	76503	22	76303	22	76403

1) SW / A/F [mm]. Weitere Schlüsselweiten auf Anfrage / other A/F sizes upon request

alkitronic® AVS Vierkantstift / Square pin

	AVS-AT 1-		AVS-AT 3-		AVS-AT 5-		AVS-AT 8-		AVS-AT 10-	
	VK □	No.	VK □	No.	VK □	No.	VK □	No.	VK □	No.
	1/2"	77120	3/4"	77125	1"	77129	1"	77134	1"	77138
	3/4"	77121	1"	77126	1 1/2"	77130	1 1/2"	77135	1 1/2"	77139
	1"	77122	1 1/2"	77127	2 2/1"	77131	2 2/1"	77136	2 2/1"	77140

Bei den Sonderzubehörteilen empfehlen wir die Abstützungen den technischen Gegebenheiten anzupassen (vermeiden Sie z.B. eine Vollbelastung). Beachten Sie, dass bei Verwendung von Sonderzubehörteilen die Kräfteinwirkung auf das Werkzeug, vom Normalfall abweichen kann.

Zubehör ohne Bruchgarantie - M₀ Grenze abhängig von der Abstützung.
Fragen Sie uns nach Zubehör in andere Größen oder Abmessungen.

We recommend to adapt the reaction devices/arms to the technical conditions when using special accessories (e.g. avoid full load). When using special accessories please mind that the power effect on the tools may differ from the normal cause.

Accessories without guarantee against breakage - torque limit depends on reaction device/arm.
Please ask for accessories in further sizes or dimensions.

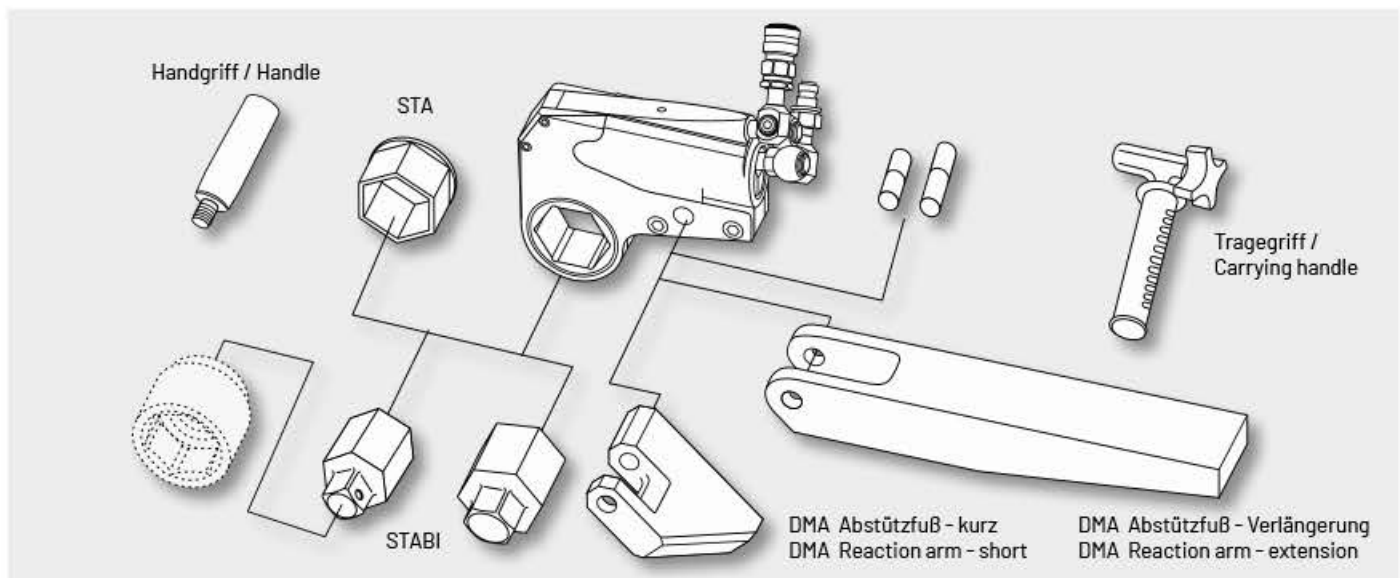
alkitronic® AT / AX Griffe / Handles

AT / AX Handgriff / Handle		
alkitronic®	Thread M10	Thread M12
No.	20221	20222

AT / AX Tragegriff / Carrying handle		
alkitronic®	nur/only AT 1	AT 1 / AT 2 / AX 2
No.	77124	71057

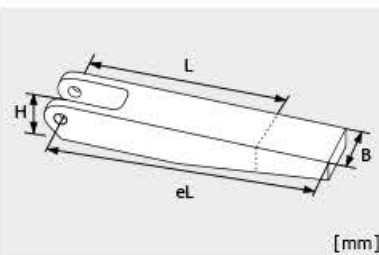
alkitronic®	AT 3 / AT 5 / AT 8 / AT 10	AX 4 / AX 8 / AX 16	AT 20 / AT 25 / AX 20
No.	71058	71058	71059

alkitronic® AX Zubehör/Accessories



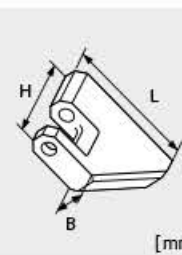
alkitronic® AX Reaktionsaufnehmer / Reaction device (DMA)

DMA Verlängerung lang / Extension long (L) - extra lang / extra long (eL)



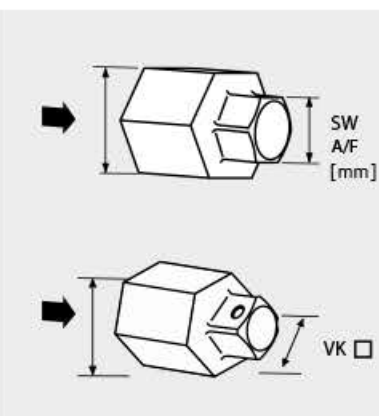
Typ/Type	No. L	No. eL	L ²	eL ²	B/H ²
AX 1	70351	70361	208	243	38/32
AX 2	70352	70362	214	505	50/48
AX 4	70353	70363	297	516	61/52
AX 8	70354	70364	530	530	77/64
AX 16	70355	70365	546	546	93/77
AX 32	70356	70366	607	546	115/100
AX 45	70357	---	auf Anfrage / upon request		

DMA Abstützfuß kurz / Reaction arm short



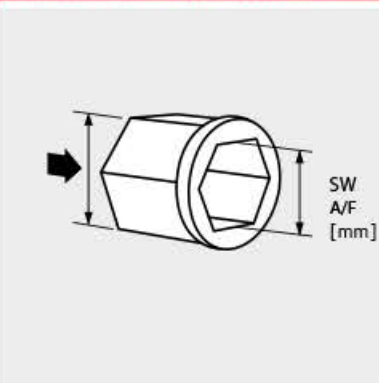
Typ/Type	No.	L ²	B/H ²
AX 1	70341	70	13/50
AX 2	70342	110	26/83
AX 4	70343	144	31/108
AX 8	70344	182	45/136
AX 16	70345	230	64/162
AX 32	70346	285	83/211
AX 45	70347	auf Anfrage / upon request	

alkitronic® STABI Standardverbinder / Standard connector



alkitronic® →	STABI 36 mm		STABI 46 mm		STABI 55 mm		STABI 65 mm		STABI 80 mm	
	SW ¹	No.	SW ¹	No.	SW ¹	No.	SW ¹	No.	SW ¹	No.
	17	75103	17	75113	27	75123	27	75143	27	75152
	19	75104	19	75114	30	75124	30	75144	30	75153
	22	75105	22	75115	32	75125	32	75145	32	75154
	24	75106	24	75116	36	75126	36	75146	36	75155
	27	75107	27	75117	41	75127	41	75147	41	75156
			32	75118			46	75148	46	75157
			36	75119					50	75158
									55	75159
	VK □	No.	VK □	No.	VK □	No.	VK □	No.	VK □	No.
	3/4"	75101	1"	75111	1"	75121	---	---	1 1/2"	75151
	1"	75102	1 1/2"	75112	1 1/2"	75122	---	---	---	---

alkitronic® STA Standardadapter / Standard adaptor



STA	STA	STA	STA	STA	STA	STA	STA	STA	STA
→ 36 mm	→ 46 mm	→ 50 mm	→ 55 mm	→ 60 mm	→ 65 mm	→ 70 mm	→ 75 mm	→ 80 mm	→ 85 mm
SW ¹	No.	SW ¹	No.	SW ¹	No.	SW ¹	No.	SW ¹	No.
24	31705	24	31751	36	31720	36	31711	36	31718
		36	31720	36	31711	36	31718	36	31721
		36	31711	36	31718	36	31721	36	31731
		36	31718	36	31721	36	31731	46	31871
		36	31721	36	31731	46	31871	36	31739
		36	31739	46	31871	36	31739	55	31851
		46	31719	41	31712	46	31715	41	31732
		41	31712	46	31715	41	31732	50	31872
		46	31713	50	31716	46	31723	55	31873
		50	31714	55	31717	50	31724	60	31874
		55	31717	50	31724	50	31734	60	31874
		55	31725	55	31725	55	31735	65	31875
		60	31726	60	31726	60	31736	65	31875
		65	31737	60	31736	60	31736	65	31875
		65	31737	65	31737	65	31737	65	31875
		65	31745	65	31745	65	31745	65	31875
		65	31746	65	31746	65	31746	65	31875
		65	31747	65	31747	65	31747	65	31875
		65	31747	65	31747	65	31747	65	31875

1) SW / A/F [mm]. Weitere Schlüsselweiten auf Anfrage / other wrench sizes are available upon request. 2) ca. Maße in mm / approximate dimensions in mm.

Product News Backup Wrench

Applications

- **alkitronic® backup wrench** prevents self-holding the nuts from spinning during the tightening and loosening of a bolt. To release the tension over the adjusting screw, easily and quickly remove the backup wrench, which is clamped firmly against the support after mounting.
- The support on the backup wrench is fixed with a bolt. After tightening the fixation bolt must be loosened and the backup wrench released. This method is the most flexible and secure one.
- The **alkitronic® backup wrench** consists of a handle and a cartridge with different AF sizes.

Advantages

- The **alkitronic® backup wrench** with the cartridges has less total weight than a one-piece construction.
- Strong and sturdy version for robust working
- Ergonomic and safe handling
- Compact design
- Mechanical function – no hydraulic
- After the application easy and simple detachment
- For use with or without handle
- Waiving inadequate tightening/loosening using screwdrivers, clamping tongs, socket spanners, etc.



Technical Data / Standard Products

Cartridges AF (mm)

46	50	55	60	65	70
75	80	85	90	95	100

Other AF sizes on request



alkitronic® backup wrench in use on the bolt circle in a wind power plant.



alkitronic® backup wrench with handle.

alkitronic®

TORQUE POWER WORLDWIDE

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Made in Germany by

alki TECHNIK GmbH
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Product News

Hanging Mount EFCip

Applications

- **alkitronic® Hanging mount:** For industrial and stationary use, such as in combination with a balancer (pulley block).
- A hanging mount perfectly adapted to fit the EFCip/ECWip, specially developed by **alkitronic®**.
- **Portable and quick to use:** Designed for professional use for all your bolting needs.
- **Multifunctional potential:** Designed for use on industrial cranes based on the German quality and safety standard.

Advantages

- **Functional efficiency:** Quicker assembly with fast, effort-saving transfer for different bolting situations.
- **Versatile:** Hanging mounts for horizontal or vertical fastening connections, depending on requirements and application.
- **Quick to use:** EFCip and ECWip fastening material included.
- **Safe handling:** Easy to attach and detach.
- **Original alkitronic® quality accessories:** Stainless steel materials.
- **Ergonomic:** Physically reducing worker strain.
- Now available for all EFCip models.



Mount for vertical driving, Item No.: 11425



Mount for horizontal driving, Item No.: 11424



Horizontal
alkitronic® EFCip application



Installation information for **alkitronic® EFCip/ECWip**

The mount is secured in the thread for the blocking pin. A blocking pin, however, cannot be used during the application.

The hanging mount thus ensures safe and quick torque multiplier height movements without twisting the lifting strap or balancer steel cable.

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Product News Transport rollers for alkitronic® carry cases

Applications

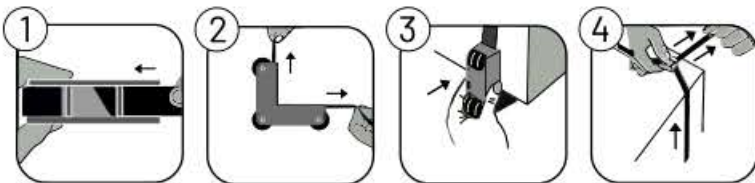
- **Transport rollers for carry cases**, ideal for all heavy torque multipliers (e.g. **alkitronic® EF**) or hydraulic pumps (e.g. **alkitronic® NOVA**).
- **Easy transport**: Effortless manoeuvring of the **alkitronic®** carry cases by pulling or pushing.
- **Flexible assembling**: Can be fixed with straps, stickers, or screws (optional). All components can be reused. Spare stickers are included in the set.
- Up to 50 kg load capacity per roller pair.

Advantages

- **Efficient working**: Fast and ergonomic transport of the carry cases.
- **Easy set-up**: Simple and pragmatic retrofitting and assembly. No tools required!
- **Safe for your health**: Pleasant pulling instead of carrying.
- **alkitronic® sustainability standard**: Manufactured in an environmentally friendly manner from renewable materials (manufacturer's claim).
- Reusable and versatile!



Example: Assembly of transport rollers with straps



1 Insert straps under wheels

2 Pull the strap through the roller housing

3 Position transport roller under carry case

4 Tighten strap and fix with clamp lock

Scope of supply

One set of rollers includes*:

- 2x transport rollers
- 2x straps with clamp lock (2.5 x 400cm)
- 12x adhesive dots
- Color: black

*) For all technical data and instructions, please refer to the manufacturer's data sheet supplied with the device

We recommend the transport rollers for the following alkitronic® carry cases:

XE-Series:	Models EF, EC
XM-Series:	Selected models, e.g. HG-60
XP-Series:	Selected models, e.g. CLS 2/4800
XH-Series:	Selected models, e.g. NOVA hydr. pump

12 adhesive dots



2 transport rolls



2 straps with clamp lock



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**alkitronic® – the torque technology manufactory
for extreme applications**





Why choose us

The alkitronic® brand stands for:



Quality:

Our products are engineered and manufactured in Germany



Experience:

Since 1984 we have assembled vast and exceptional experience in bolting technology



Manufactory:

We offer premium production with highest quality materials and standards



Service:

We provide you and your alkitronic® product with several customized services



Innovation:

We continuously invest in research and development for improvements and innovative technologies

About us

Engineering, manufacturing and distribution of high-quality and innovative products in the field of bolting systems – this is what alki TECHNIK GmbH stands for.

As a leading international company, located in Germany and operating in more than 60 countries worldwide, we have successfully developed and produced specialized bolting equipment since the early 1980s under the alkitronic® brand.

Our products

The alkitronic® product range is extremely diverse and offers solutions for your individual needs:

- Electric Torque Multipliers
- Battery-driven Torque Multipliers
- Pneumatic Torque Multipliers
- Hydraulic Torque Wrenches
- Manual Torque Multipliers

Our core industries

alkitronic® products are supplied to customers globally targeting a wide range of industries:

- Wind energy
- Steel construction
- Construction machinery
- Agriculture and forestry machinery
- Water/oil/gas/chemicals
- Food and beverage

We are also pleased to serve customers in building and construction, open cast-mining, railways and tracks, ship-building and offshore construction, etc.

Our customers

Our national and international customers and partners trust in the high quality of alkitronic® products for over 30 years such as Audi, BMW, Caterpillar, Komatsu, Liebherr, MAN, Siemens and ThyssenKrupp.



High product quality

Creation, design and distribution from a single reliable and highly experienced source with German state-of-the-art engineering.

- ✓ long product life by using high-quality materials such as aluminium
- ✓ high break resistance, stability and resistance guarantee a low risk of failure
- ✓ ideal force multiplier with a high reliability
- ✓ gives the tool the required robustness for the application in various industries
- ✓ lower running costs and maintenance requirements compared to plastic housing

Precision

All repeatedly measured torques of alkitronic® tools work extremely precise and show a max. deviation of $\pm 3\%$ within the range of the required target range.

- ✓ accuracy is constant with every single bolting connection
- ✓ fast and safe processing of bolting connections
- ✓ no reworking necessary, torque values are reliably reached

Efficiency

Our brushless motor guarantees high efficiency.

- ✓ creates a greatly reduced risk of failure
- ✓ provides no hidden costs for maintenance and repair
- ✓ guarantees a fast cost amortization
- ✓ smooth running at reduced noise level compared to brushed motor
- ✓ active regulation of drive rotation speed
- ✓ constant torque even at low battery levels - for battery tools

Intuitive design

The compact and innovative design guarantees an intuitive handling with a safe and easy menu navigation.

- ✓ use in restricted space
- ✓ no extensive training required
- ✓ simple 1-finger trigger operation for forward and reverse
- ✓ ergonomic and comfortable operation
- ✓ safe and health-conform operation, e. g. the 360° rotating EFCip handle prevents reaction forces being transferred to the operator

Permanent 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

The digital connectivity of our alkitronic® products provides for an easy documentation (for our new generation models).

- ✓ bluetooth interface & transmission via alkitronic® APP
- ✓ documentation of the bolted joints

Safe and high-quality bolting by automatic motor-shut-off

Our alkitronic® electric torque multipliers switch off automatically as soon as the required/pre-set torque is reached. This provides you.

- ✓ pre-set torque values are precisely and reliably reached through an intelligent processor-controlled motor
- ✓ prevents overtightening of the bolting connection
- ✓ improved safety standards
- ✓ longer duration of the bolted connection



Worldwide and voltage independent use of alkitronic® tools

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

- ✓ due to the built-in power supply in the EFCip and EF we can always achieve the same torque within a voltage range of 100 - 253V / 45 - 66 Hz.
- ✓ even with very long electricity extension cables, when the voltage drops, we have no loss of torque

Suitable for all weather conditions

The protection class IP 54 specifies the suitability of our electrical components for various ambient conditions, as well as the protection of human beings against potential danger during use.

- ✓ productivity and safety when working in moisture or dust/dirt conditions
- ✓ our tools are dust- and splashproof
- ✓ various fields of application

Service and training

Your plus for more service and training.

- ✓ technical advice on site
- ✓ training offers
- ✓ manufacturer's calibration and certification
- ✓ spare part and repair service

Do you need further information?

Please contact:

alki TECHNIK GmbH – Unterlettenweg 4 – 85051 Ingolstadt/Germany
Development, Production and Distribution of Bolting Systems

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CERTIFICATE



The certification body **PIAQ Deutschland GmbH** hereby certifies that the company

alkitronic®
HOME OF TORQUE POWER

alki TECHNIK GmbH
Unterlettenweg 4
85051 Ingolstadt, Germany

Scope of the company
Development, production, service and sales of screw systems

has successfully applied a **Quality Management System** in accordance with the following standard.

ISO 9001:2015

Certificate registration no. : PIAQ-DE-AL-9001-0385-0
Valid from : 19.08.2022
Valid until : 18.08.2025

Certification body
Stuttgart, 19.08.2022

PIAQ Deutschland GmbH, Certification – conformity assessment
Theodor-Heuss-Strasse-6
70174-Stuttgart, Germany
Tel: + 49 711 9952 1638
www.piaq.de



This certificate remains the property of PIAQ and must be returned to PIAQ in the case of cancellation or suspension. The validity of the certificate is maintained only if the surveillance audit is successfully performed. Further information can be requested at info@piaq.de. The authenticity of this document can be verified at: <https://www.piaq.de/zertifikatsdatenbank>.



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