



alkitronic® X E-SERIES

EAF

Battery driven
torque multiplier



ready for use, everywhere

alkitronic® EAF

Applications

- **alkitronic® EAF:** Battery driven 2-speed torque multiplier from 130 Nm to 6,000 Nm / 95 ft.lbs to 4,430 ft.lbs.
- **Short fastening cycles:** Fast gear for run down and power gear for highest torques and precision.
- **Mobile and always ready for use:** Compact design for convenient working in limited spaces or without power supply.
- **Efficient operation:** Fast and easy gear-changing, great torque range - you can choose from 22 torque values.

Advantages

- **Integrated fully-automatic release function:** Caused by high torsional force, it is often impossible repositioning the multiplier on the next bolt joint. The automatic release function enables a fast, secure "run free" of the reaction absorber **DMA** and also relieves stresses within the multiplier.
- **Low running costs:** The low-wear, synchronous motor is maintenance free.
- **Health-preserving:** Lowweight, ergonomically designed, low noise emissions. No noise protection necessary.
- **High performance:** Two lithium-ion battery packs ensure up to 360 screw joints in a row. Each battery features an LED charge level indicator.
- **Exact shut-off torque** even at low battery levels.

alkitronic® Specials

- **Very low susceptibility to damage and failure:** Motor housing made of special polymer: Break-proof, impact-proof and resistant to corrosion.
- **Intelligent energy management and faster workflow:** Electronics protects battery cells from overcharging and depth discharge. Cooled battery packs during recharging. This reduces charging times and enhances maximum performance and durability.
- **High-performance gears,** produced in a chip-free high-precision process.

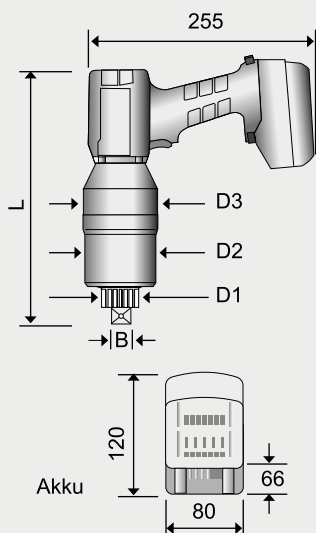


Technical Data

Type		EAF2 / 80	EAF2 / 150	EAF2 / 200	EAF2 / 280	EAF2 / 300	EAF2 / 400	EAF2 / 600
Torque range (approx.) *	Nm	130-850	220-1400	260-2200	300-2800	320-3200	380-4100	500-6000
	ft.lbs	95-625	160-1035	190-1625	220-2065	235-2360	280-3025	370-4430
Square drive	B	3/4"	3/4"	1"	1"	1"	1 1/2"	1 1/2"
Diameter (approx.)	D ₁ mm	41	41	54	54	72	72	72
Diameter (approx.)	D ₂ mm	85	85	85	85	93	93	109
Diameter (approx.)	D ₃ mm	88	88	88	88	97	97	109
Length (approx.)	L mm	295	295	320	350	370	370	380
Weight without DMA (approx.) **	kg	5,6	5,6	6,4	7,5	7,5	9,2	9,0
Idle speed 1 st gear	rpm	8,0	4,0	3,0	1,8	1,5	1,5	0,8
Idle speed 2 nd gear	rpm	26,0	14,0	10,0	6,5	6,0	5,4	3,0

*) 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

Measurements



Scope of Delivery



2 lithium-ion battery packs 18 V, 5.2 Ah, battery charger, tool case.



Repeat shut-off accuracy $\pm 3\%$ (same bolting connection).
All **alkitronic®** torque multipliers are CE-certified.

alkitronic®
HOME OF TORQUE POWER

alkitronic® products
Made in Germany by

alki TECHNIK GmbH
Development, Production and
Distribution of Bolting Systems

Unterlettenweg 4
85051 Ingolstadt
Germany

fon +49 841 97499-0
fax +49 841 97499-90

info@alkitronic.com
www.alkitronic.com

Product News

Battery Torque Multiplier EAW

Applications

- **alkitronic®EAW:** Battery powered 2-speed torque multiplier for torques from 90 Nm to 4,000 Nm. Angled design with high operating comfort.
- **Mobile and always ready for use:** Compact design for convenient working in limited spaces or without power supply.
- **Extremely short fastening cycles:** Fast gear for run down and power gear for highest torques and precision.
- **Efficient operation:** Fast and easy gear-changing, great torque range - each gear has eleven torque values to choose from.

Advantages

- **Low running costs:** The low-wear brushless synchronous motor is maintenance free.
- **Health-preserving:** Low weight, ergonomically designed, low noise emissions. No noise protection necessary.
- **High performance:** Two lithium-ion battery packs ensure up to 360 screw joints in a row. Each battery features a LED charge level indicator.
- **Exact shut-off torque even at low battery levels.**

alkitronic® specials

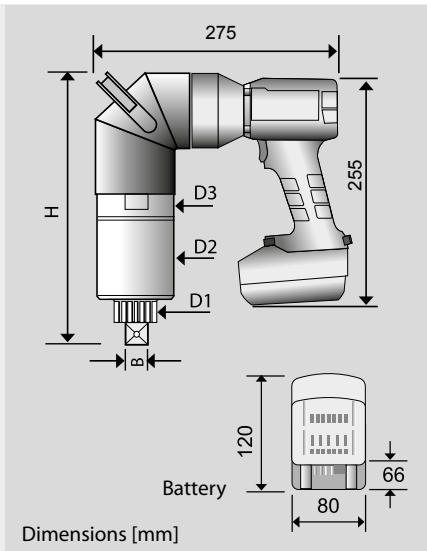
- **Very low repair requirements:** Robust motor housing made of special polymer. It is break-proof, impact-proof and resistant to corrosion.
- **Angle-drive with optimised efficiency and great running characteristics.**
- **Intelligent energy management:** Smart electronics protect every battery cell from overcharging and depth discharge.



Technical Data: alkitronic® EAW Models

Type		EAW2 / 80	EAW2 / 150	EAW2 / 200	EAW2 / 280	EAW2 / 300	EAW2 / 400
Torque range (approx.) *	Nm	115-860	150-1400	250-2200	300-2800	360-3200	500-4100
	lbf.ft	85-635	110-1030	185-1620	220-2065	265-2360	370-3025
Square drive	B	3/4"	3/4"	1"	1"	1"	1 1/2"
Diameter (approx.)	D ₁ mm	41	41	54	54	72	72
Diameter (approx.)	D ₂ mm	85	85	85	85	93	93
Diameter (approx.)	D ₃ mm	88	88	88	88	97	97
Height (approx.)	H mm	250	250	295	305	310	320
Weight without DMA (approx.) **	kg	7,5	7,5	9,0	9,5	9,5	11,2
Idle speed 1 st gear	rpm	7,0	4,0	2,0	1,7	1,5	1,0
Idle speed 2 nd gear	rpm	24,0	13,0	6,5	6,0	5,0	4,0

*) 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



alkitronic®

TORQUE POWER WORLDWIDE

alkitronic® products
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alki TECHNIK GmbH
Development, Production and
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Unterlettenweg 4
85051 Ingolstadt
Germany

fon +49 841 97499-0
fax +49 841 97499-90

info@alkitronic.com
www.alkitronic.com

EFCip

Electric Torque Multiplier



world's No. 1 choice

Applications

- **alkitronic® EFCip / ECWip** electric torque multipliers from 75 to 6,500 Nm (55 to 4,800 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 **ECWip** 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-driven operation, control or 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® EFCip / ECWip** 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.

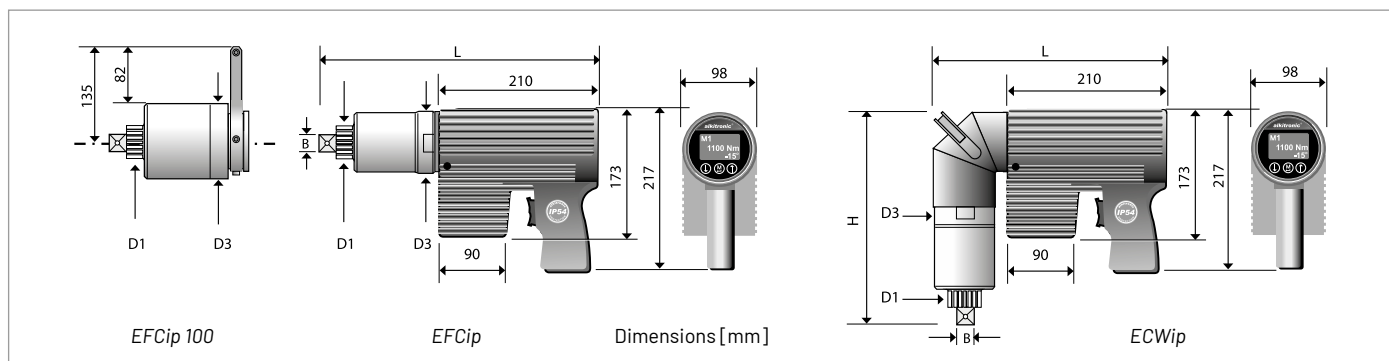
Special solution: Preset torque increment according to customer's requirement (5 Nm / 4 ft.lbs min.)
All **alkitronic®** torque multipliers with CE-certification.

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 EFCip

Type		EFCip 10	EFCip 20	EFCip 30	EFCip 35	EFCip 40	EFCip 50	EFCip 60	EFCip 65	EFCip 70	EFCip 80	EFCip 90	EFCip 100
Torque range (approx.) * Nm		75-420	80-620	100-940	150-1300	150-1500	190-1850	250-2350	290-2900	350-3500	440-4300	500-5000	650-6500
Torque range (approx.) * ft.lbs		55-305	60-540	75-690	110-960	110-1100	140-1360	185-1660	215-2135	260-2580	325-3170	370-3690	480-4800
Square drive	B	3/4"	3/4"	3/4"	3/4"	1"	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 ECWip

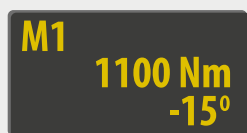
Type		ECWip 10	ECWip 20	ECWip 30	ECWip 35	ECWip 40	ECWip 50	ECWip 60	ECWip 65	ECWip 70	ECWip 80	ECWip 90	ECWip 100
Torque range (approx.) * Nm		75-420	80-620	100-940	150-1300	150-1500	190-1850	250-2350	290-2900	350-3500	440-4300	500-5000	650-6500
Torque range (approx.) * ft.lbs		55-305	60-540	75-690	110-960	110-1100	140-1360	185-1660	215-2135	260-2580	325-3170	370-3690	480-4800
Square drive	B	3/4"	3/4"	3/4"	3/4"	1"	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	310	310	310	310	310	310	310	310	318	318	326	315
Height (approx.)	H mm	249	249	249	271	300	300	305	305	315	315	345	350
Weight without DMA (approx.)	kg	12	12	12	12	13	14	14	14	16	16	17	18
Idle speed	rpm	70	40	30	22	15	14	11	8	7	5	4	3

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

OLED Display EFCip / ECWip

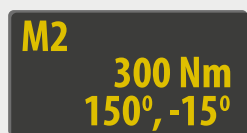
Display bolting programs mode 1 and mode 2

Mode 1 (standard)



Mode 1
Bolting via torque.
Automatic relief according to
pre-set angle degrees.

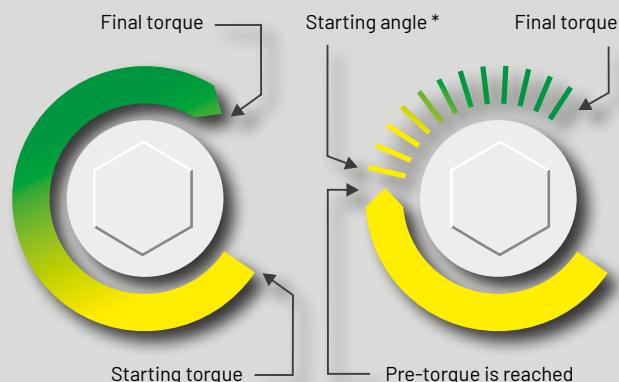
Mode 2 (option)



Mode 2
Torque/angle procedure for high-
quality bolting connections. Display
example of pre-torque, angle and
loosening angle.

Software mode 1 is pre-installed in the basic version.
For user-specific bolting applications or settings, other software is available
(see left side "bolting programs").

Chart Mode 1 and Mode 2



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

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

EF

Electric Torque Multiplier



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 900 to 9,800 Nm (665 to 7,230 ft.lbs).

Advantages

- **Low running costs** due to maintenance-free, low-wear, brushless synchronous motor with excellent efficiency.
- **High motor speed:** Up to three times faster than conventional electrical torque multipliers.
- **Permanent higher joint quality** compared to ratchet torque tools by continuous rotation of the square drive.
- **Menu-guided intuitive operation**, with control and warning signals.
- **OLED-Display** anti-glare and high contrast - for perfect reading under all weather conditions.
- **Comfortable working** due to the 360° rotatable motor unit; 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 $\pm 2\%$** for the same bolting application.
- **Exceptionally robust** motor housing (aluminum alloy).
- **For safe, comfortable tool guidance, model-specific operating and holding handles are included** in the scope of delivery. These can be mounted as required at several fastening points provided.

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 4: Bolting parameters according to individual customer requirements
Software suite 5: Bluetooth transmission via **alkitronic® APP**.
 Documentation of the bolted joints (target-actual status, recording for each joint)

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

Display views

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

Mode 1 / M1 (Standard)

M1
1100 Nm
-15°

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

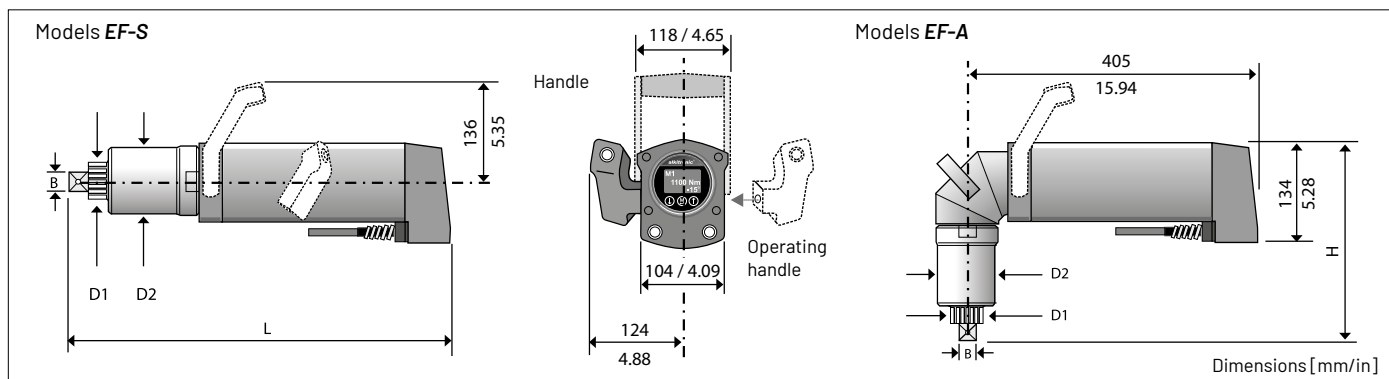
Mode 2 / M2 (Option)

M2
300 Nm
150°, -15°

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	900-4300	1150-6200	2000-7800	2050-9500	3500-20600	6200-42000
	ft.lbs	315-1990	370-2285	665-3170	850-4575	1475-5755	1510-7010	2580-15195	4575-30980
Square drive	B	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2 1/2"	2 1/2"
Diameter (approx.)	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	62 / 137
Idle speed	rpm	10	8	6	5	4	3	1	0.7

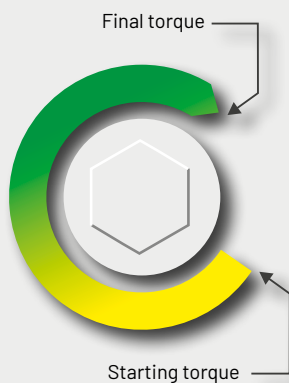
Models EF-A

Type		EF-A 400	EF-A 600	EF-A 800	EF-A 1000
Torque range (approx.) *	Nm	900-4300	1150-6200	1060-8000	2050-9800
	ft.lbs	665-3170	850-4575	780-5900	1510-7230
Square drive	B	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Diameter (approx.)	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	350 / 13.8
Weight without DMA** (approx.)	kg / lbs	15.5 / 34	17.5 / 38.6	20 / 44	29 / 64
Idle speed	rpm	5	4	3	2

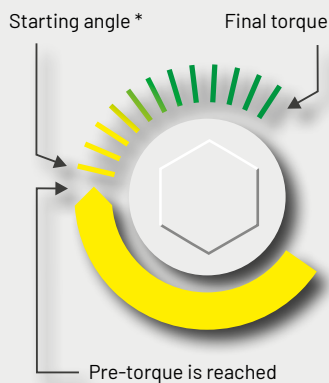
*) When loosening bolts, a higher torque (up to 20 %) may be necessary (release torque). We will be pleased to help you with your choice. **) Torque reaction arm

Scheme bolting programs

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

E (PG)

Electric Torque Multiplier



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.

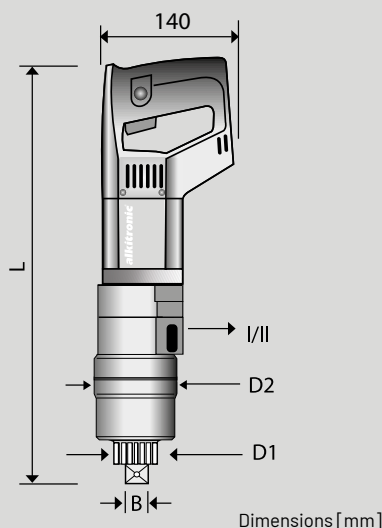


Technical Data: Models **alkitronic® E**

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	173
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	24,5
Idle speed gear 2	r/min	46	20	9	6	4	3,4	2,6
Idle speed gear 1	r/min	15	7	3	1,8	1,3	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 I, protection class IP 20.

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Development, Production and
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Unterlettenweg 4
85051 Ingolstadt
Germany

fon +49 841 97499-0
fax +49 841 97499-90

info@alkitronic.com
www.alkitronic.com

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:

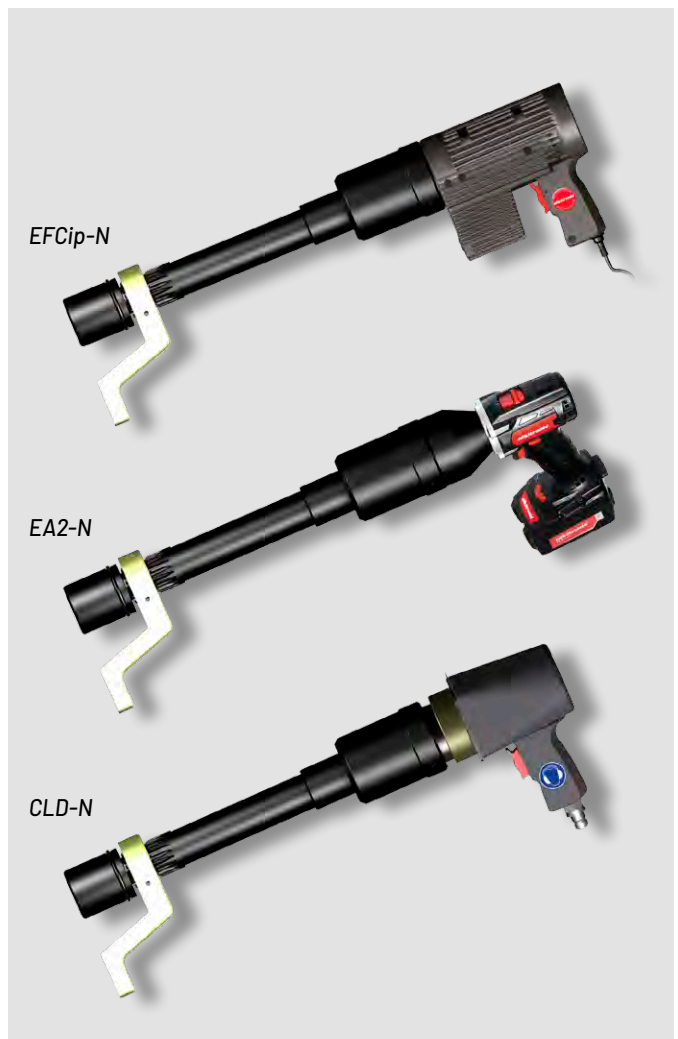
- Ideal for use in explosion-proof working environment.
- World proven reliable pneumatic drive motor.

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.



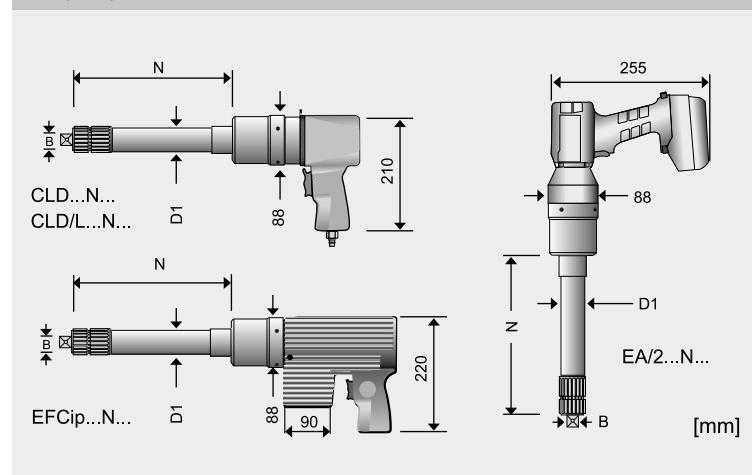
Technical Data

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	N 12	N 12	N10 N12	N10 N12	N10 N12	N 12	N 12	N 12	N10 N12	N10 N12	N 12	N 12	N10 N12	N10 N12	N10 N12
(e.g. EFCip30 N12)				N15 N18	N15 N18	N15 N18				N15 N18	N15 N18			N15 N18	N15 N18	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

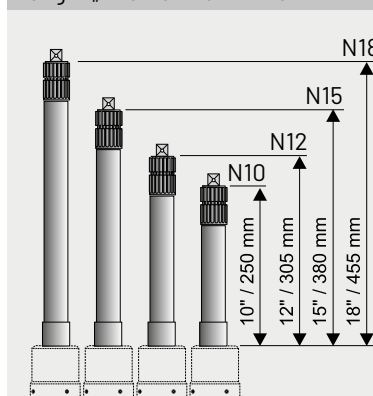
*) When loosening bolts, a higher torque (up to 20 %) may be necessary (release torque). We will gladly advise you in detail.

**) 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

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Development, Production and
Distribution of Bolting Systems

Unterlettenweg 4
85051 Ingolstadt
Germany

fon +49 841 97499-0
fax +49 841 97499-90

info@alkitronic.com
www.alkitronic.com

CL

Pneumatic
Torque Multiplier



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 1,070 ft.lbs.
- **alkitronic® CLD comfortable torque multiplier** with rotating handle for torques of 225 to 7,225 ft.lbs.
- **alkitronic® CLS2** high-performance 2-gear machine for torques of 90 to 35,855 ft.lbs.

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

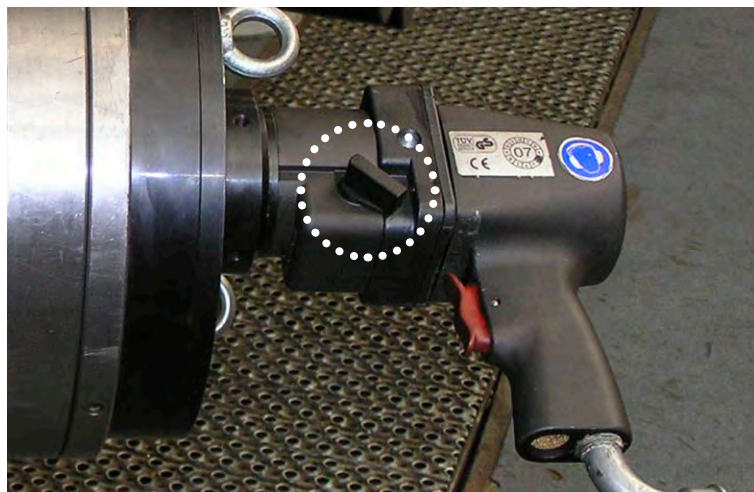
- **Simple 1-finger operation** for right/left rotation, option to enable the reaction to be locked in one position.
- **Robust cast aluminum housing** with proven pneumatic drive.
- **Proven high-performance gears**, produced in a chip-free, high-precision process produce high loads with low wear.
- **alkitronic® CLS2** with uniquely high torque - 35,855 ft.lbs.
- **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 29-10,000 psi at a volume flow of approx. 122-915 cu.in./min. The torque accuracy depends on the stability of the supply system.

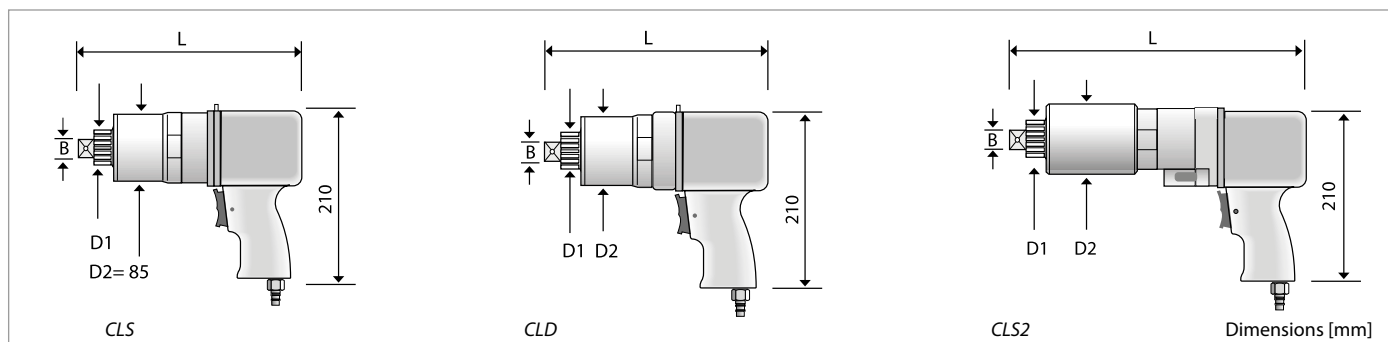


alkitronic® CLS2, 2-gear pneumatic torque multiplier. Mechanically switchable from fast gear to power gear.

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	8,5
Idle speed	rpm	60	38	34	27	19	13	9	7	6	4

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	133
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	15	25
Idle speed	rpm	19	13	9	7	5	4	3	2	1,5	1

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	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	

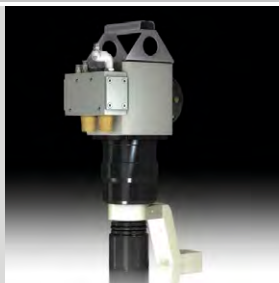
*) When loosening a bolted connection, up to 20% higher torque may be required (loosening torque). We will gladly advise you with details.

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.

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.



CLD/L

Pneumatic Torque Multiplier



Applications

- Pneumatic torque multipliers for torques up to 1,900 Nm.
- Continuous rotation tightening or loosening of all heavy duty fastening connections.
- Perfect for bolted applications in hazardous, explosive environments.

Advantages

- **Quick, compact, and safe** for fast joint assembly.
- The 360 degree rotating handle ensures **comfortable operation**. No reaction forces are transferred to the operator.
- **Permanently higher joint quality** (compared to impact and hydraulic wrenches) by continuous rotation of the square drive.

alkitronic® specials

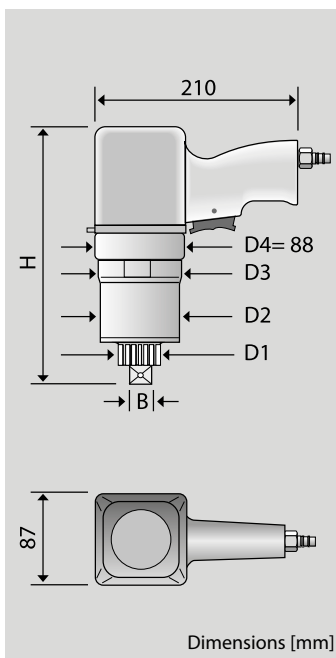
- **Simple 1-finger operation** for right/left rotation, option to enable the reaction to be locked in one position.
- **Robust cast aluminum housing** with proven pneumatic drive.
- **Proven high-performance gears**, produced in a chip-free, high-precision process to produce high loads with low wear.
- Optional **silencer levels to reduce the noise** from the motor exhaust on request.



Technical Data: Models CLD/L

Type		CLD/L 1	CLD/L 2	CLD/L 3	CLD/L 4	CLD/L 5	CLD/L 6	CLD/L 7
Torque range (approx.) *	Nm	70-230	130-400	160-500	300-900	360-1100	500-1450	650-1900
	lbf.ft	50-170	100-290	120-370	220-660	270-810	370-1070	480-1400
Square drive	B	1/2" / 3/4"	3/4"	3/4"	3/4"	3/4"	3/4" / 1"	1"
Diameter (approx.)	D ₁ mm	41	41	41	41	41	41 / 54	54
Diameter (approx.)	D ₂ mm	85	85	85	85	85	85	85
Diameter (approx.)	D ₃ mm	88	88	88	88	88	88	88
Height (approx.)	H mm	255	255	255	275	275	275 / 300	300
Weight without DMA (approx.)	kg	6	6	6	7	7	7	7
Idle speed	rpm	60	34	27	19	13	9	7

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

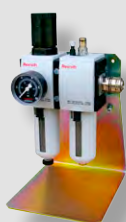


Specifications

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



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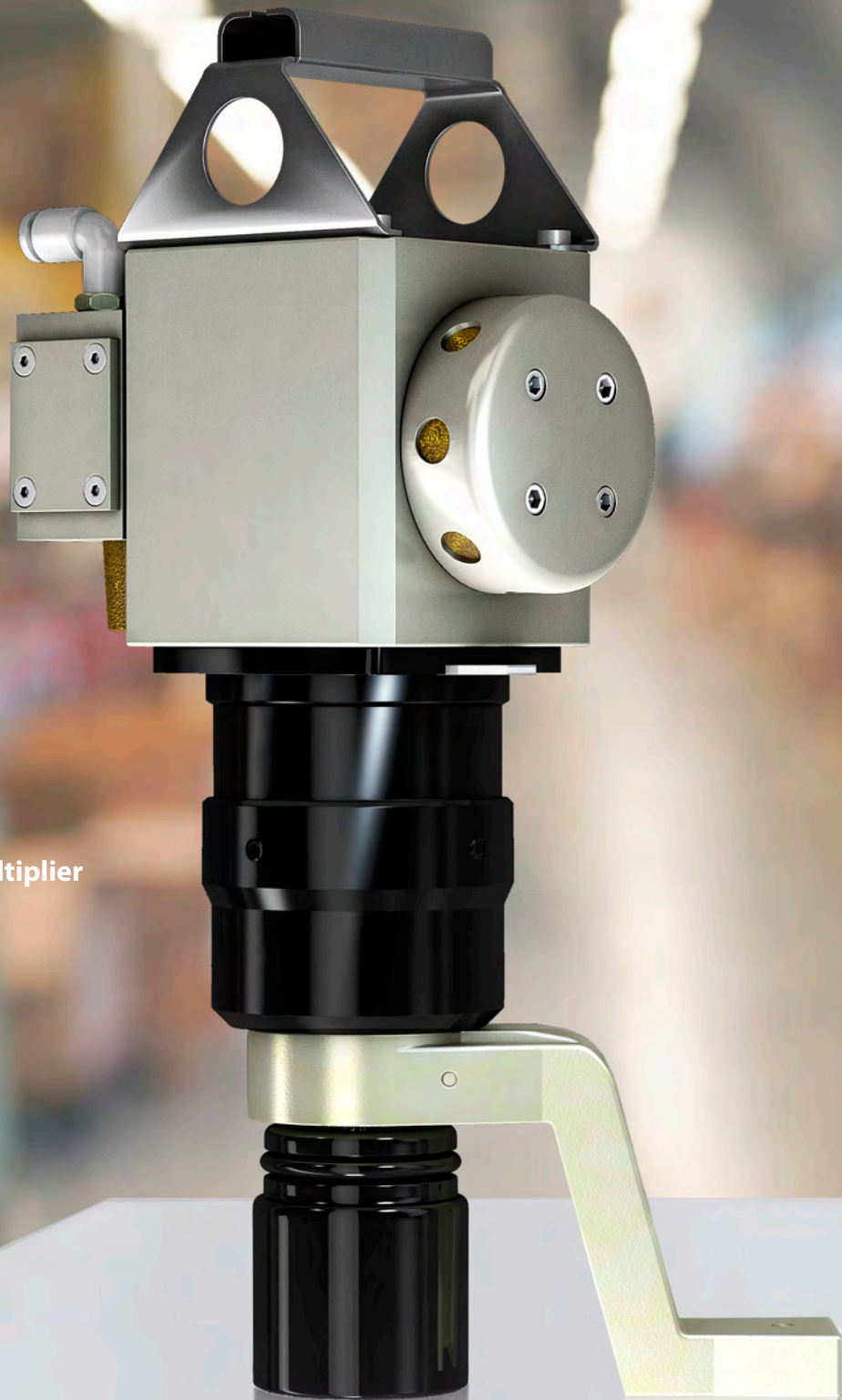
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Made in Germany by

alki TECHNIK GmbH
Development, Production and
Distribution of Bolting Systems

Unterlettenweg 4
85051 Ingolstadt
Germany

fon +49 841 97499-0
fax +49 841 97499-90

info@alkitronic.com
www.alkitronic.com



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

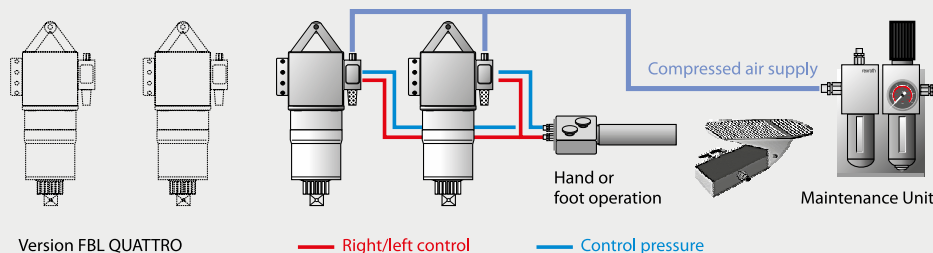
- Universal valve block for pneumatic steering according to specific requirements.
- Robust pneumatic drive with sophisticated high-performance gear, reliably used around the world .
- **alkitronic®CLV remote systems** for one to four **CLV** torque multipliers.
- **alkitronic® exhaust system** for a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



alkitronic® CLV Remote Systems

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

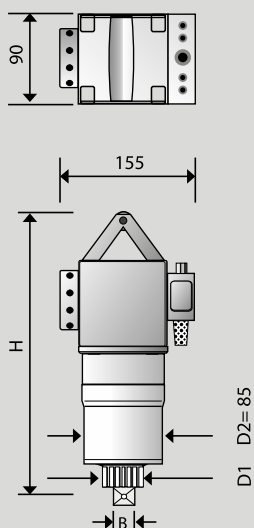
The **FBL QUATTRO** version for four **CLV** torque multipliers more details on request.



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	41	41	41	41	41	54	54	54	54
Height (approx.)	L mm	296	296	296	296	318	318	320	340	372	372
Weight without DMA (approx.)	kg	5.5	5.5	6	6	6.5	6.5	6.5	6.5	7	7
Idle speed	rpm	60	38	34	27	19	13	9	7	6	4

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



Dimensions [mm]

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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alki TECHNIK GmbH
Development, Production and
Distribution of Bolting Systems

Unterlettenweg 4
85051 Ingolstadt
Germany

fon +49 841 97499-0
fax +49 841 97499-90

info@alkitronic.com
www.alkitronic.com

AX

Hydraulic
Torque Wrench



Applications

- Hydraulic torque wrench with two hydraulic hose system for tightening or loosening heavy bolt connections.
- alkitronic® AX** convertible type torque wrench up to 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® 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

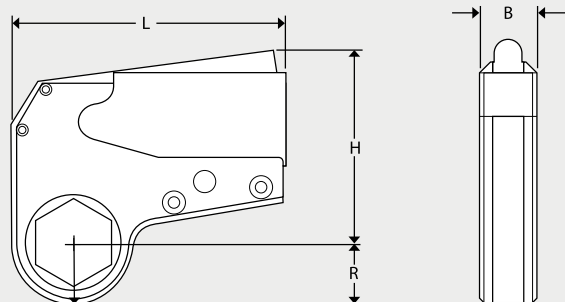
Type			AX 1	AX 2	AX 4	AX 8	AX 16	AX 32 ***
Torque range (approx.)*		Nm	60-770	260-2600	540-5400	1150-11900	2150-22900	4450-49000
		lbf.ft	45-560	192-1928	395-3950	830-8630	1560-16600	3220-35650
Hexagon	AF **	mm	14-32	27-55	36-70	55-95	80-115	95-145
Radius (approx.) from-to	R	mm	19-25	26-42	34-52	46-79	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	1	2.5	5.18	10.7	16.5	25

*) 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 ±3%.

For a fast, safe and reliable operation of the hydraulic torque wrenches we recommend our **alkitronic® NOVA** or **VELOX** hydraulic pumps (700 bar pressure, can be used worldwide in all mains grids 100-253 V / 45-66 Hz).

Model **alkitronic® AX**



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

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85051 Ingolstadt
Germany

fon +49 841 97499-0
fax +49 841 97499-90

info@alkitronic.com
www.alkitronic.com

AT

Hydraulic Torque Wrench



Application

- **Hydraulic torque wrenches** with two hydraulic hose systems for tightening or loosening heavy bolt connections.
- **alkitronic® AT** hydraulic torque wrenches from 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 an advanced and sustainable design.
- **High economic efficiency:** Long operating life, reliable bolting, low maintenance.

alkitronic® specials

- **alkitronic® 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.

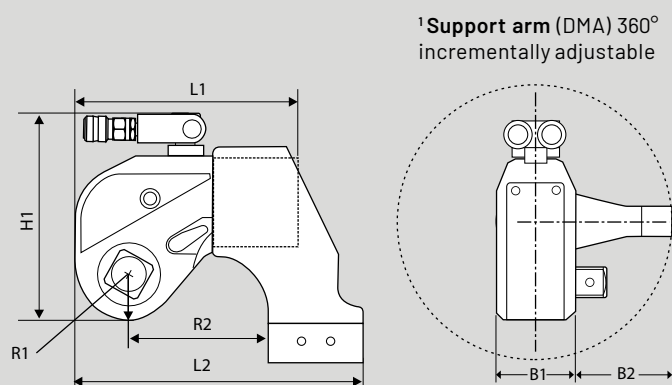


Technical Data

Type		AT 1	AT 2	AT 3	AT 5	AT 8	AT 10	AT 20	AT 25	AT 35	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
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 VELOX hydraulic pumps (700 bar pressure, can be used worldwide in all mains grids 100-253 V / 45-66 Hz).

Model **alkitronic® AT**



alkitronic® AT,
use in a wind power plant.

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85051 Ingolstadt
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info@alkitronic.com
www.alkitronic.com

X Driver Systems

Hydraulic Wrenches



thinnest, fastest and most versatile

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)

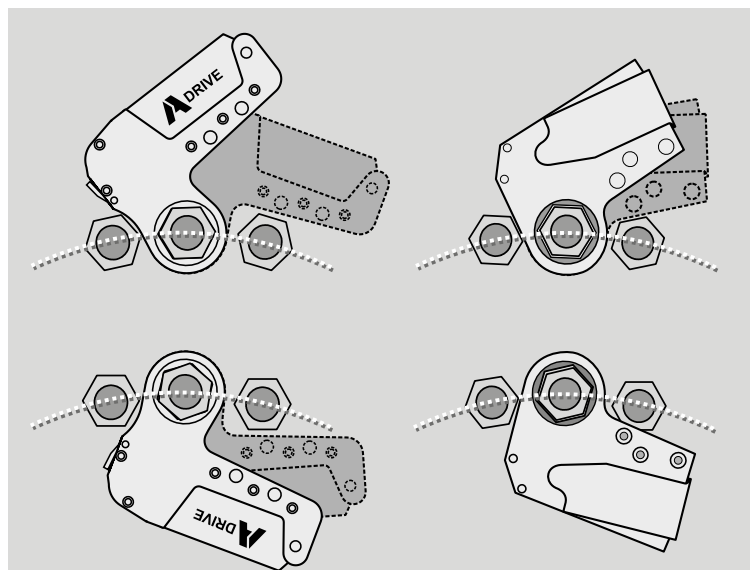
- Slimmest design - no loose shroud - totally enclosed.
- Reaction arm/pad ready with 2 pin holes.
- Patented reaction pawl easily disengaged with screw.
- Fewer parts. Other hex links have many moving parts, increasing breakdowns and need for complex repairs.
- Deepest reach on the market - fits all 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.

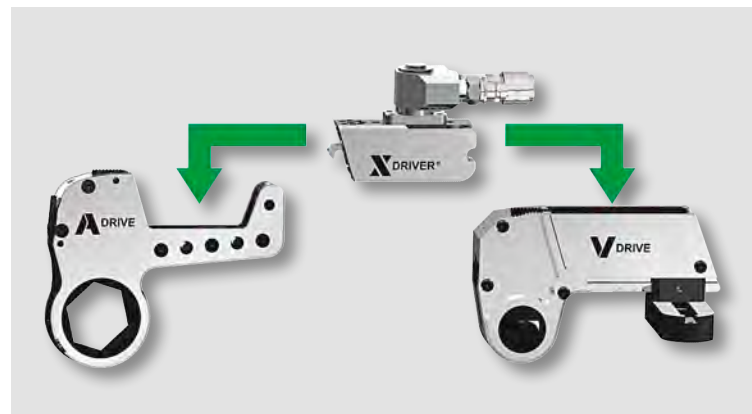
Specifications

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.



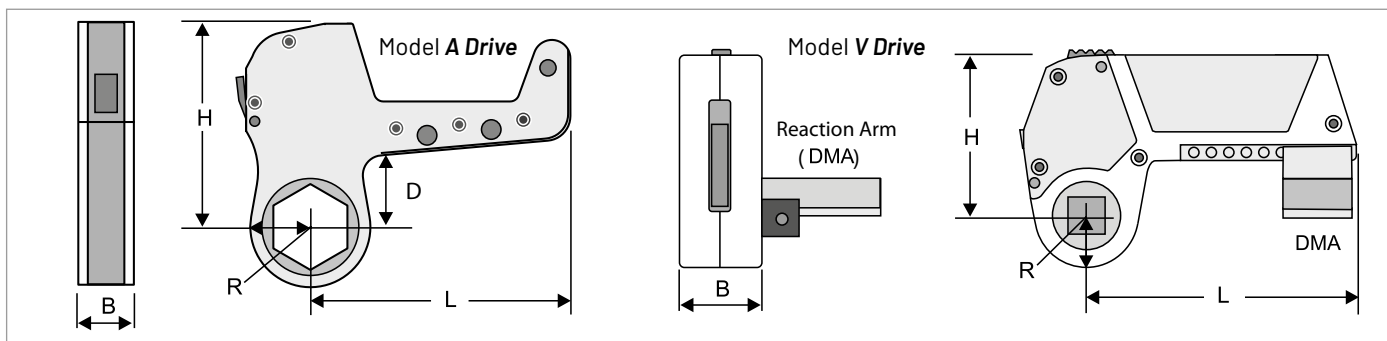
The hydraulic wrench is so advanced it's not only a tool, it's an entire system. The X-Drive locks into drives which fully protect the cylinder from reaction points. The X-Drive pivots inside the drives, in-line, to prevent side load and tension to the cylinder, for safety and endurance.



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



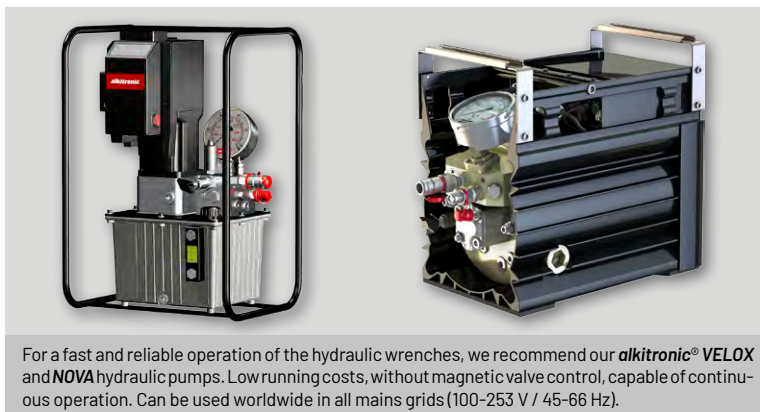
Models A Drive (Hex. link)

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).



VELOX

Electric Hydraulic Pump

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

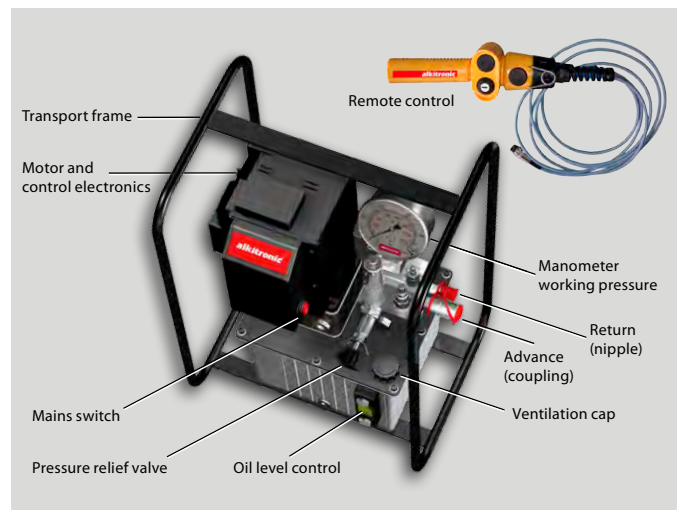
- Low maintenance costs** due to the maintenance-free, low-wear and brushless synchronous motor. No magnetic control valves and therefore no wear.
- Modular construction** for cost-saving upgrade or parts exchange.
- Individual operation** - basic version with manual control.
- Integrated motor protection**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



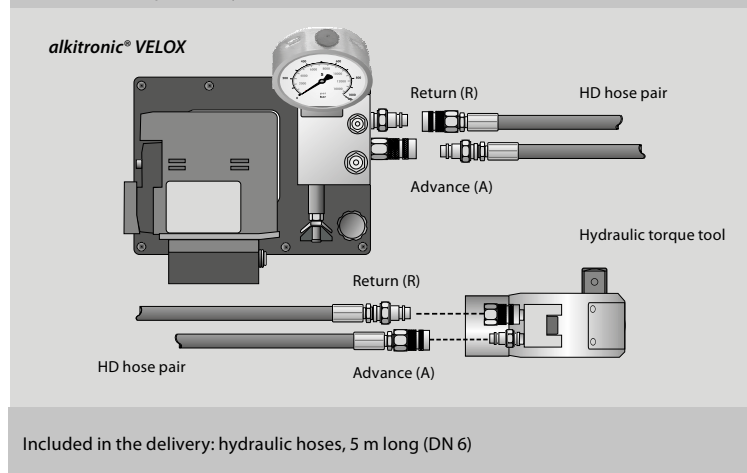
Technical Data

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	110/230 V, 50/60 Hz, 1600 W	230 V, 50/60 Hz, 2100 W
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



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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Unterlettenweg 4
85051 Ingolstadt
Germany

fon +49 841 97499-0
fax +49 841 97499-90

info@alkitronic.com
www.alkitronic.com

Product News

electric Hydraulic Pump LEVA

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.

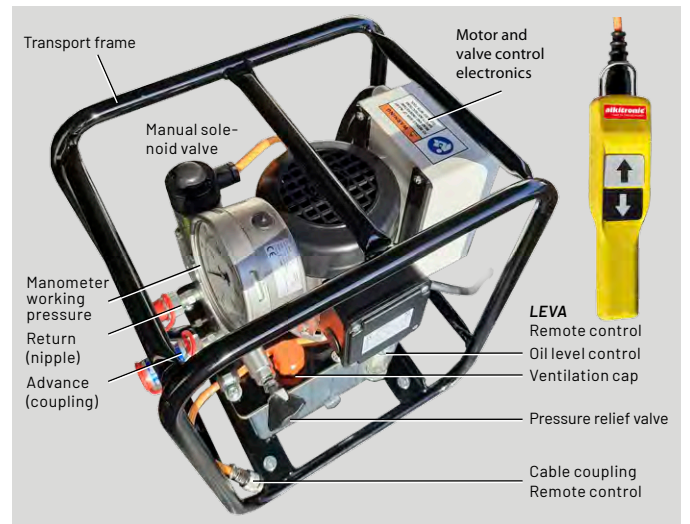
alkitronic® specials

- 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.

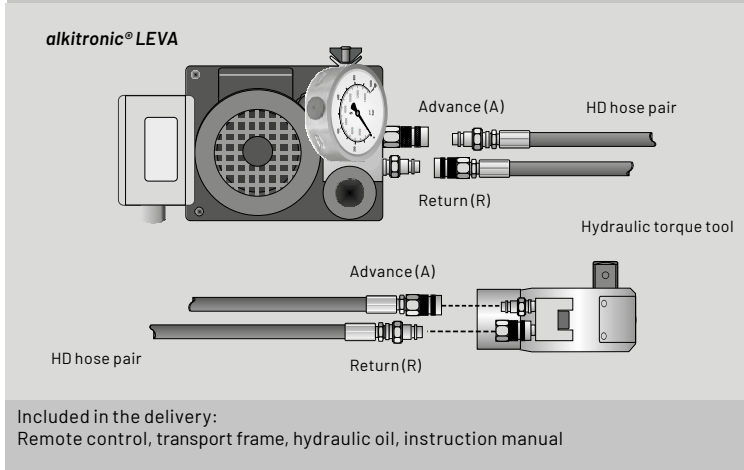
Technical Data

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

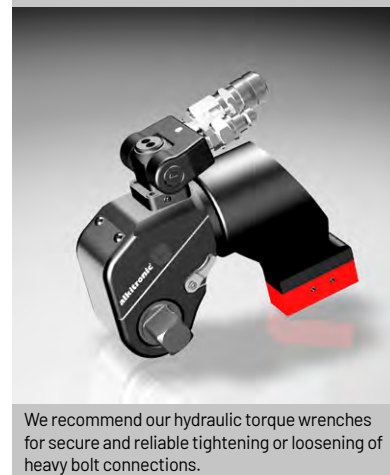
Description	alkitronic® LEVA
Drive electrical, nominal sensitivity	230 V / 50 Hz, 250 W
Protection class	IP20
Output low pressure area	3.2 l/min < 75 bar
Output medium pressure area	0.9 l/min at 75 to 220 bar
Output high pressure area	0.4 l/min to 700 bar
Tank capacity	1.8 l
Surrounding temperature (use 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



alkitronic® AT Hydraulic Torque Wrench



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85051 Ingolstadt
Germany

fon +49 841 97499-0
fax +49 841 97499-90

info@alkitronic.com
www.alkitronic.com

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	

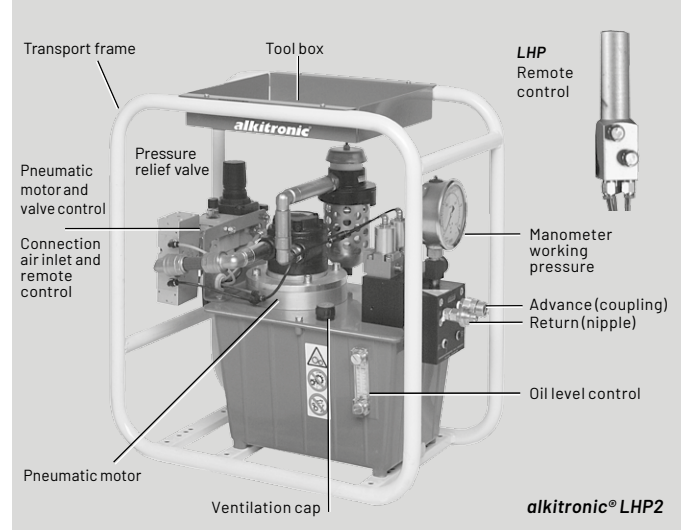
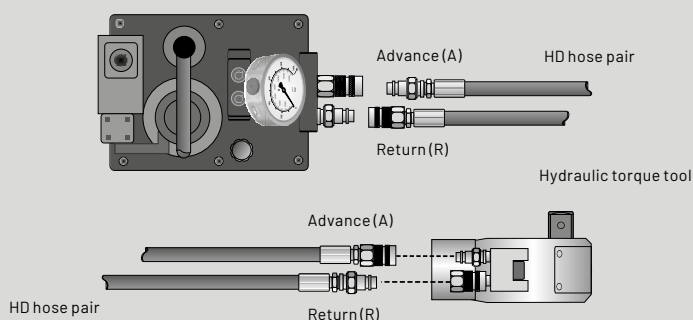


Diagram of hydraulic hose connection (one wrench example)

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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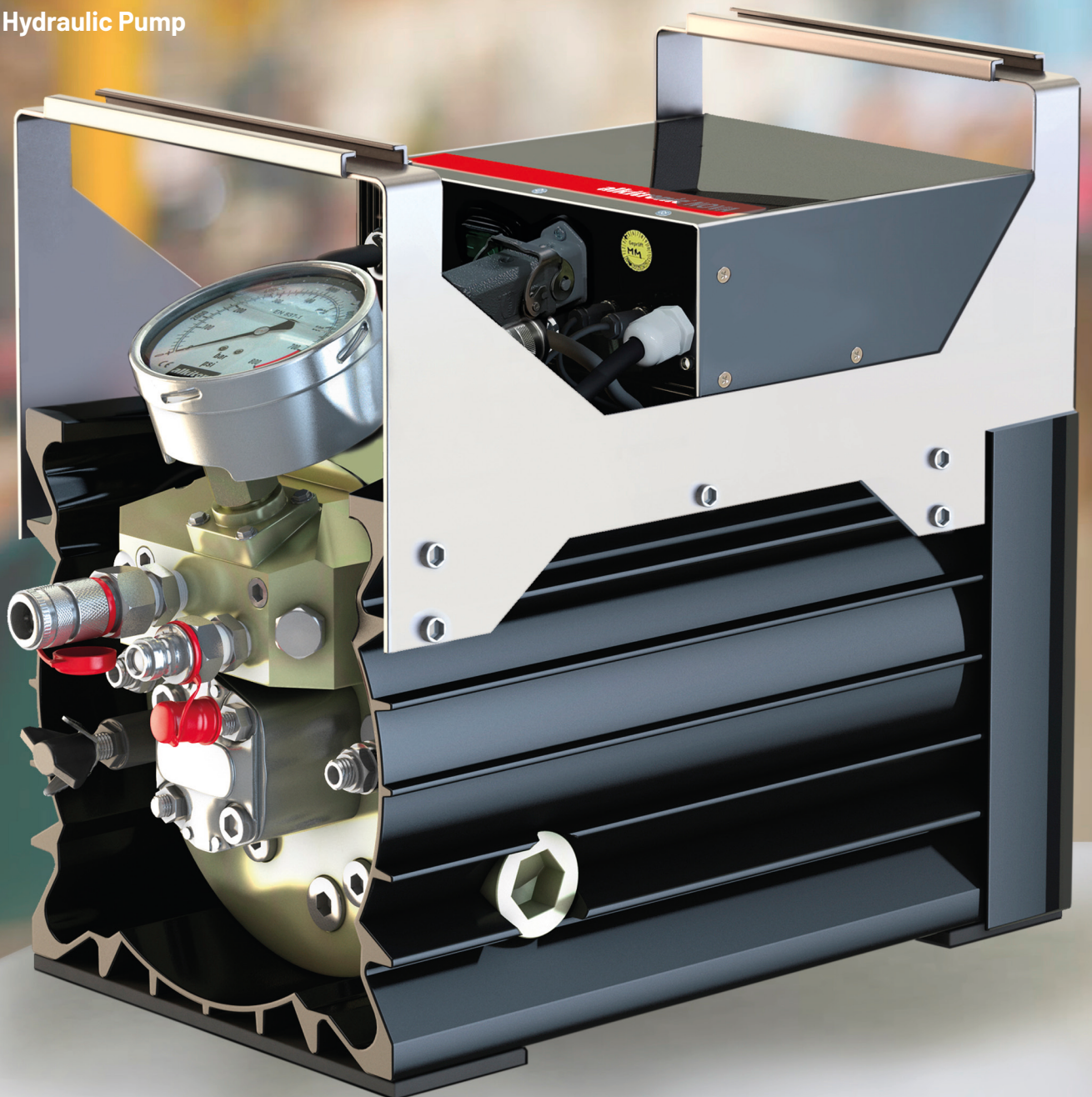
fon +49 841 97499-0
fax +49 841 97499-90

info@alkitronic.com
www.alkitronic.com

alkitronic® X^{H-SERIES}

NOVA

Electric Hydraulic Pump



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.

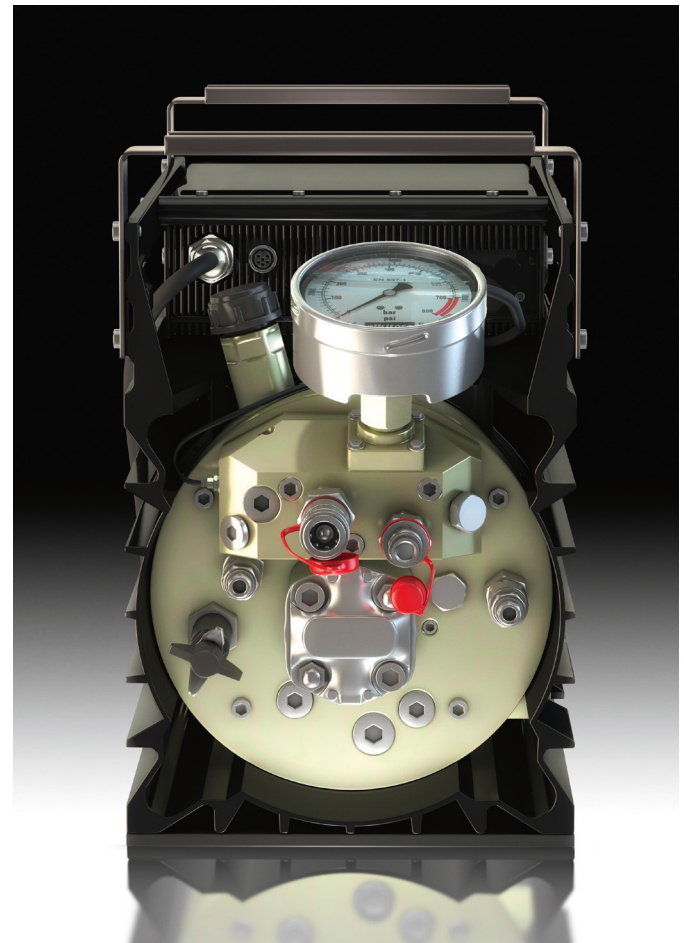
- Duo- or Quattro version (for 2 or 4 wrenches etc.) optional.
- Robust compact design for use on the roughest construction sites.

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.



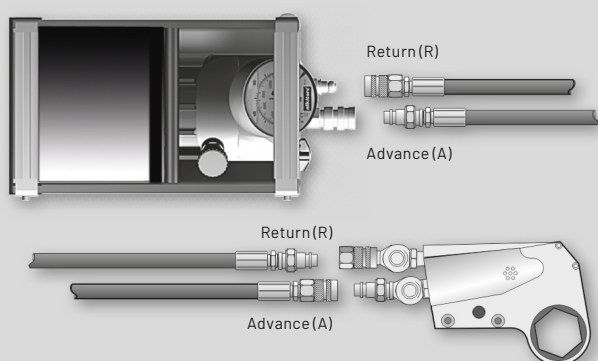
Technical Data

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.

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Germany

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fax +49 841 97499-90

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www.alkitronic.com



Manual Torque Multiplier



Applications

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

Advantages

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

alkitronic® specials

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

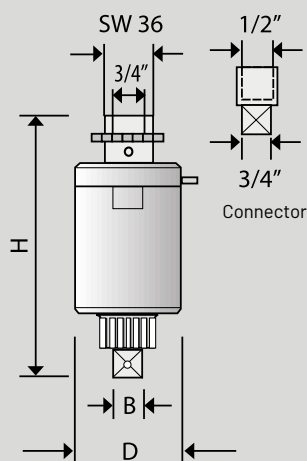


Technical Data: Model **H** (without ratchet) and **HG** (with ratchet)

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

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

Dimensions



Connector:

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

Specifications

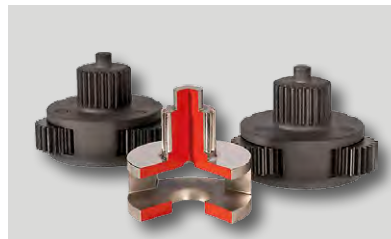
Torque Multiplier input via:

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

Handwheel - for rough turning loose bolts/nuts.

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

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



alkitronic® - power gear components



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

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Unterlettenweg 4
D-85051 Ingolstadt

fon +49 841 97499-0
fax +49 841 97499-90

info@alkitronic.com
www.alkitronic.com

Missing Link XCE Link

Manual Torque Multiplier



where sockets will not fit ...

alkitronic® Norwolf specialty products

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

Missing Link

The **Missing Link™** torque multiplier fits into tightly confined areas where sockets will not fit.

The **Missing Link™** has become standard in the wind industry for generator feet and yaw pucks. Available in 4:1 or 6:1 ratios. The newly re-designed 6:1 **Missing Link™** fits in the narrowest of confines while maintaining a high power to weight ratio.

Advantages

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

XCE Link

The **alkitronic® Norwolf XCE Link™** is the ultimate answer for gaining access where standard pneumatic multipliers are too tall or bulky to fit application. Available in 3:1 or 4:1 ratios.

There are two available styles. The standard style has a sliding pin with which to react with any standard torque multiplier. The hub style has a specific splined hub to match the input tool of choice.

Advantages

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



Application Example: The **Missing Link™** when fitting a coupling in plant construction.

The **Missing Link™** fits more applications than any other wrench.



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.

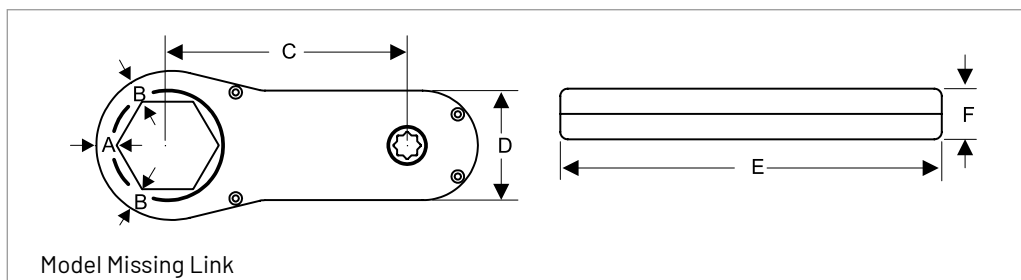


Missing Link™ - the manual torque multipliers are available with spanner sizes from 22 mm to max. 80 mm and ratios of 4:1, 6:1.

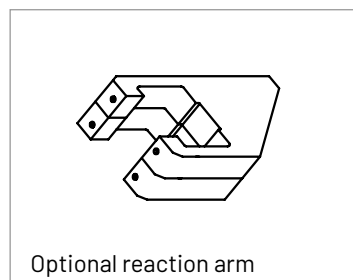
The **Missing Link™**, the most suitable multiplier for every bolting connection.

alkitronic® Missing Link and XCE Link

Technical Data



Model Missing Link



Optional reaction arm

Models Missing Link - 1/2", 4:1 Ratio - max. 340 Nm input / 1360 Nm output

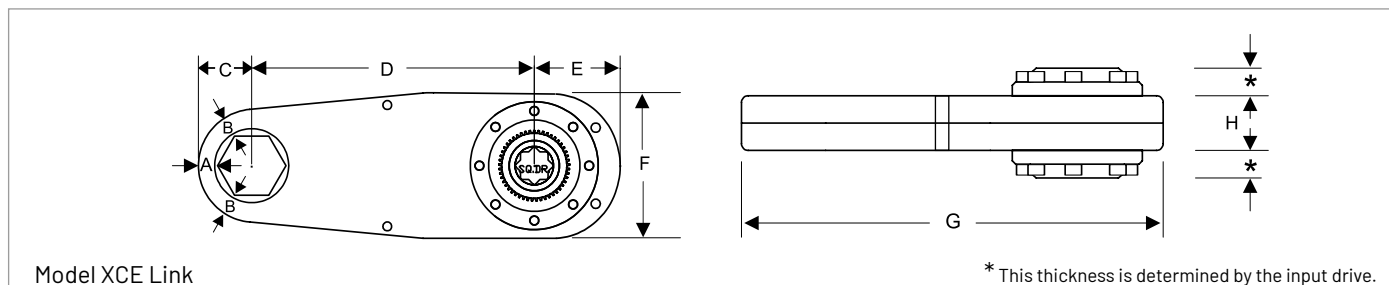
SW	22	24	27	30	32	36	41	46	50	55	60	C	151 mm
A mm	13,5	12	11.1	12	11.1	11.1	11.1	11.1	11.1	11.1	11.1	D	70 mm
B mm	15.1	13.5	12.7	13,5	12.7	12.7	12.7	12.7	12.7	12.7	12.7	F	32 mm
E mm	222	222	222	226	226	228	231	234	236	239	242		

Models Missing Link - 3/4", 4:1 Ratio - max. 815 Nm input / 3260 Nm output

SW	22	24	27	30	32	36	41	46	50	55	60	65	70	75	80	C	212 mm
A mm	21.3	20.3	18.8	17.3	16.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	D	95 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	F	45 mm
E mm	309	309	309	309	309	309	312	315	317	320	323	325	328	331	334		

Models Missing Link - 3/4", 6:1 Ratio - max. 815 Nm input / 4890 Nm output

SW	32	36	41	46	50	55	60	65	70	C	355 mm
A mm	23.3	21.3	18.8	14.3	16.3	14.3	14.3	14.3	14.3	D	102 mm
B mm	25.6	23.6	21.1	18.6	16.6	16.6	16.6	16.6	16.6	F	45 mm
E mm	476	476	476	476	476	479	481	484	487		



Model XCE Link

* This thickness is determined by the input drive.

Models XCE Link - 3/4", 3:1 Ratio - max. 1150 Nm input / 3450 Nm output

SW	24	27	32	36	41	46	50	55	60	65	70	75	80	D	156 mm
A mm	10	11	11	12	12	13	13	14	14	15	15	16	16	E	60 mm
B mm	11	11	12	12	13	13	14	14	15	15	16	16	17	F	102 mm
C mm	25	27	30	33	36	40	42	46	49	53	56	59	63	H	38 mm
G mm	241	243	246	249	252	256	258	262	265	269	272	275	279		

Models XCE Link - 1", 3:1 Ratio - max. 2440 Nm input / 7320 Nm output

SW	50	55	60	65	70	75	80	90	100	105	110	115	120	D	208 mm
A mm	13	14	14	15	15	16	16	17	18	19	20	20	21	E	80 mm
B mm	14	14	15	15	16	16	17	18	19	19	20	20	21	F	137 mm
C mm	42	46	49	53	56	59	63	70	76	80	83	87	90	H	51 mm
G mm	330	334	337	341	344	347	351	358	364	368	371	375	378		

Models XCE Link - 3/4", 4:1 Ratio - max. 1150 Nm input / 4600 Nm output

SW	24	27	32	36	41	46	50	55	60	65	70	75	80	D	196 mm
A mm	10	11	11	12	12	13	13	14	14	15	15	16	16	E	60 mm
B mm	11	11	12	12	13	13	14	14	15	15	16	16	17	F	102 mm
C mm	25	27	30	33	36	40	42	46	49	53	56	59	63	H	38 mm
G mm	281	283	286	289	292	296	298	302	305	309	312	315	319		

Models XCE Link - 1", 4:1 Ratio - max. 2440 Nm input / 9760 Nm output

SW	50	55	60	65	70	75	80	90	100	105	110	115	120	D	262 mm
A mm	13	14	14	15	15	16	16	17	18	19	20	20	21	E	80 mm
B mm	14	14	15	15	16	16	17	18	19	19	20	20	21	F	137 mm
C mm	42	46	49	53	56	59	63	70	76	80	83	87	90	H	51 mm
G mm	384	388	391	395	398	401	405	412	418	422	425	429	432		

R/SG

for Plate Heat Exchanger



designed for your needs

Applications

- These tools are ideally specialized for bolting connections on plate heat exchangers, e.g. in the food and beverage sector, the paper industry, and the chemical industry. They save much time when tightening and loosening plate packs where **perfect retention and absolute tightness are essential**.
- Reliable, low-wear operation due to **continuous rotation** when bolting with spindles or long threaded bolts.
- Depending on the application, electrical or pneumatic driven torque multipliers: torque up to 4,800 Nm.

Advantages

- **Load-free operation, with short assembly time.**
- **Fast simultaneous tightening of large plate packs** when using two or more torque multipliers diagonally.
- **alkitronic® RCL, CL2-SG** and battery driven torque multiplier **EA** with fast gear for turning in and simple, quick switching to power gear.

alkitronic® specials

- **Targeted types for convenient working in every tightening situation:** among other options between radial gearing (R) with high-performance worm drive; tangential gearing (SG) with highly efficient spur gear.
- **Long lifetime** due to extremely robust motor housing made of cast aluminum or break-proof polymer.

Specifications

Pneumatic driven models:

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

Electric driven models:

Universal AC input 100 V - 253 V, frequency 45 Hz - 66 Hz, power max. 2000 W, protection category I, EFCip with protection class IP 54 (EF optional). EA models with two lithium-ion battery packs 18 V, 5.2 Ah, and battery charger.



Image above:
alkitronic® RCL pneumatic torque multiplier in operation on a plate heat exchanger.
Image below: **alkitronic® CLV-R**

Image above:
alkitronic® EFCip-SG in operation on a plate heat exchanger.
Image below:
PHE of Alfa Laval

Product information Remote Control

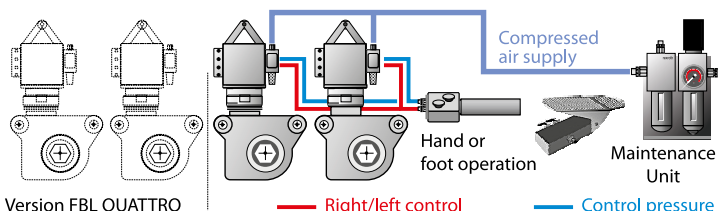
alkitronic® CLV-R or CLV-SG

Model range with convenient remote control and individual pneumatic drive. When using several torque multipliers with radial (R) or tangential (SG) gearing, large packs can be tightened fast, simultaneously, and evenly.

- **Operation** of up to four torque multipliers **simultaneously**.
- Especially effective for multiple bolting connections and serial assemblies in **semi-automatic operations**.
- **Low-level sound emission** due to integrated sound reduction.

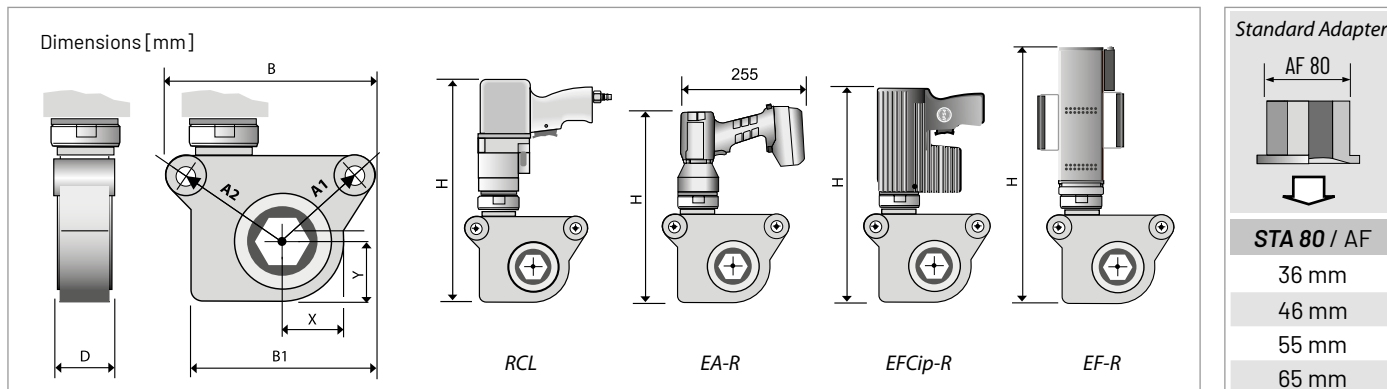
For highly efficient bolting connections with one or up to four **alkitronic® CLV** torque multipliers, preconfigured **alkitronic® Remote Systems** are already available.

FBL DUO for two **CLV** torque multiplier, **FBL QUATTRO** available on request.



Technical Data

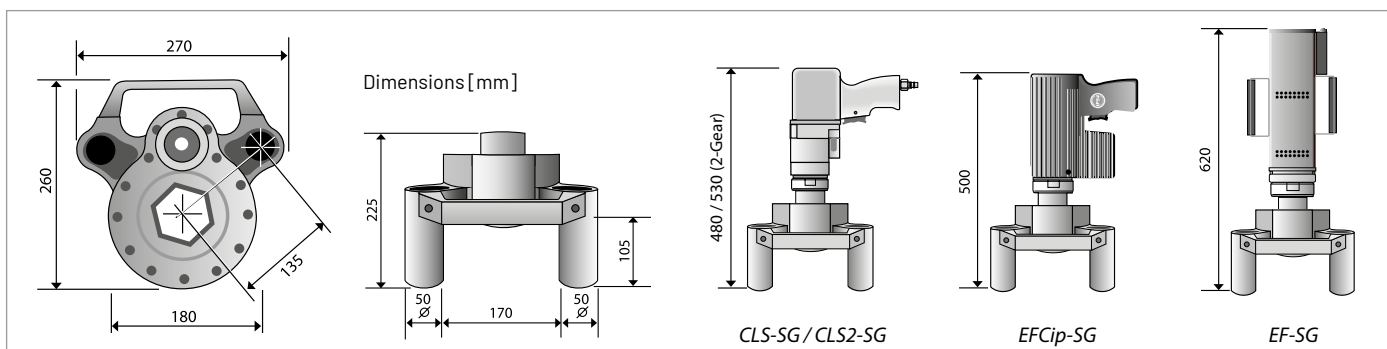
alkitronic® Radial Gearing (R)



Radial Gearing Models			Pneumatic drive			Electric drive					
			RCL (2-Gear)			EA-R (2-Gear)		EFCip-R			EF-R
Type			RCL 36	RCL 46	RCL 80	EA-R 36	EA-R 46	EFCip-R 36	EFCip-R 46	EFCip-R 80	EF-R 80
Torque range 2nd gear (approx.)		Nm	160-470	250-780	670-1975	150-450	250-730	-	-	-	-
Torque range 1st gear (approx.)		Nm	500-1500	800-2500	1645-4840	500-1500	750-2500	150-1590	250-2530	480-3840	560-3780
Width across flat (AF)		mm	36	46	80	36	46	36	46	80	80
Height (approx.)		H mm	400	435	450	400	450	385	425	475	600
Width (approx.)		B/B1 mm	230/190	252/215	325/240	230/190	252/215	230/190	252/215	325/240	325/240
Bolt distance (approx.)		A1/A2 mm	100/128	112/145	156/194	100/128	112/145	100/128	112/145	156/194	156/194
Dimensions (approx.)		X/Y mm	56/56	75/75	98/98	56/56	75/75	56/56	75/75	98/98	98/98
Dimension (approx.)		D mm	90	94	94	90	94	90	94	94	94
Weight (approx.)		kg	11	13.5	21	11	13.5	12	14.5	21	24.5
Idle speed 1st gear (approx.)		rpm	5	4.5	4	3	3	8	7	7	9
Idle speed 2nd gear (approx.)		rpm	15	14	12	10	10	-	-	-	-

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

alkitronic® Tangential Gearing (SG)



Tangential Gearing Models		Pneumatic drive		Electric drive	
		CLS-SG	CLS2-SG (2-Gear)	EFCip-SG	EF-SG
Type		CLS-SG 80	CLS2-SG 80	EFCip-SG 80	EF-SG 80
Torque range 2nd gear (approx.)	Nm	-	440-1330	-	-
Torque range 1st gear (approx.)	Nm	1330-3780	1400-3780	560-3780	560-3780
Width across flat (AF)	mm	80	80	80	80
Weight (approx.)	kg	17	17	19	22
Idle speed 1st gear (approx.)	rpm	3,5	3,5	6	10
Idle speed 2nd gear (approx.)	rpm	-	10	-	-

MDS

Mounting
Documentation Systems



MDS traceable bolting solution

Applications

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

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

Advantages

General

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

alkitronic® HSD

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

alkitronic® CLSD

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

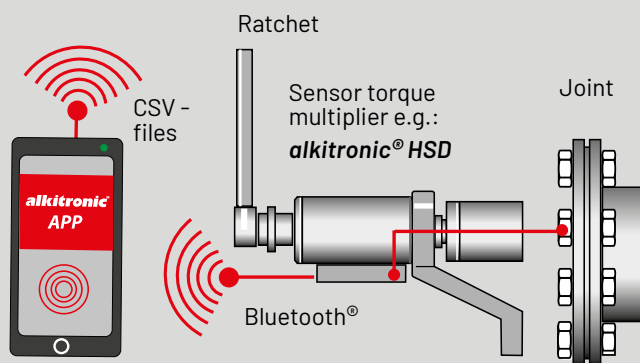
alkitronic® EASD

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

alkitronic® specials

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

alkitronic® APP application scheme

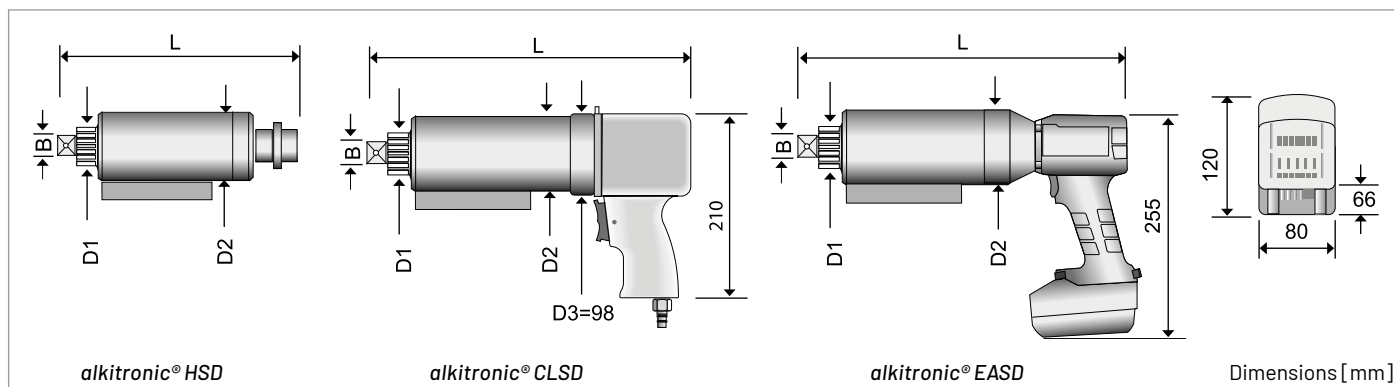


alkitronic® APP app for iOS® and android® mobiles and platform independent data exchange via CSV file transfer.

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



Technical Data



Models HSD / CLSD / EASD

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

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

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

1 Tightening with specified torque

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

2 Tightening with torque/angle procedure

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

3 Checking of torque

- Monitoring of already tightened bolt connections.

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

4 Determination of required angle

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

5 Display actual torque only with models EASD and CLSD

- Display and recording of the actual torque.

Operating range HSD / CLSD / EASD with OLED graphic display

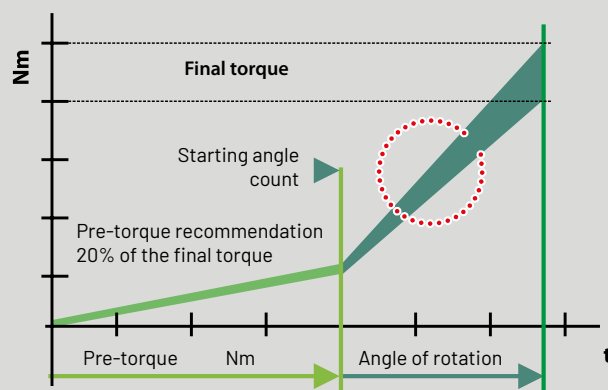
Example for menu-guided operation (HSD)



Examples Display image in mode "Program 1"

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

Diagram for program 2 and 4



Information on rotational angle setting for torque/angle procedure

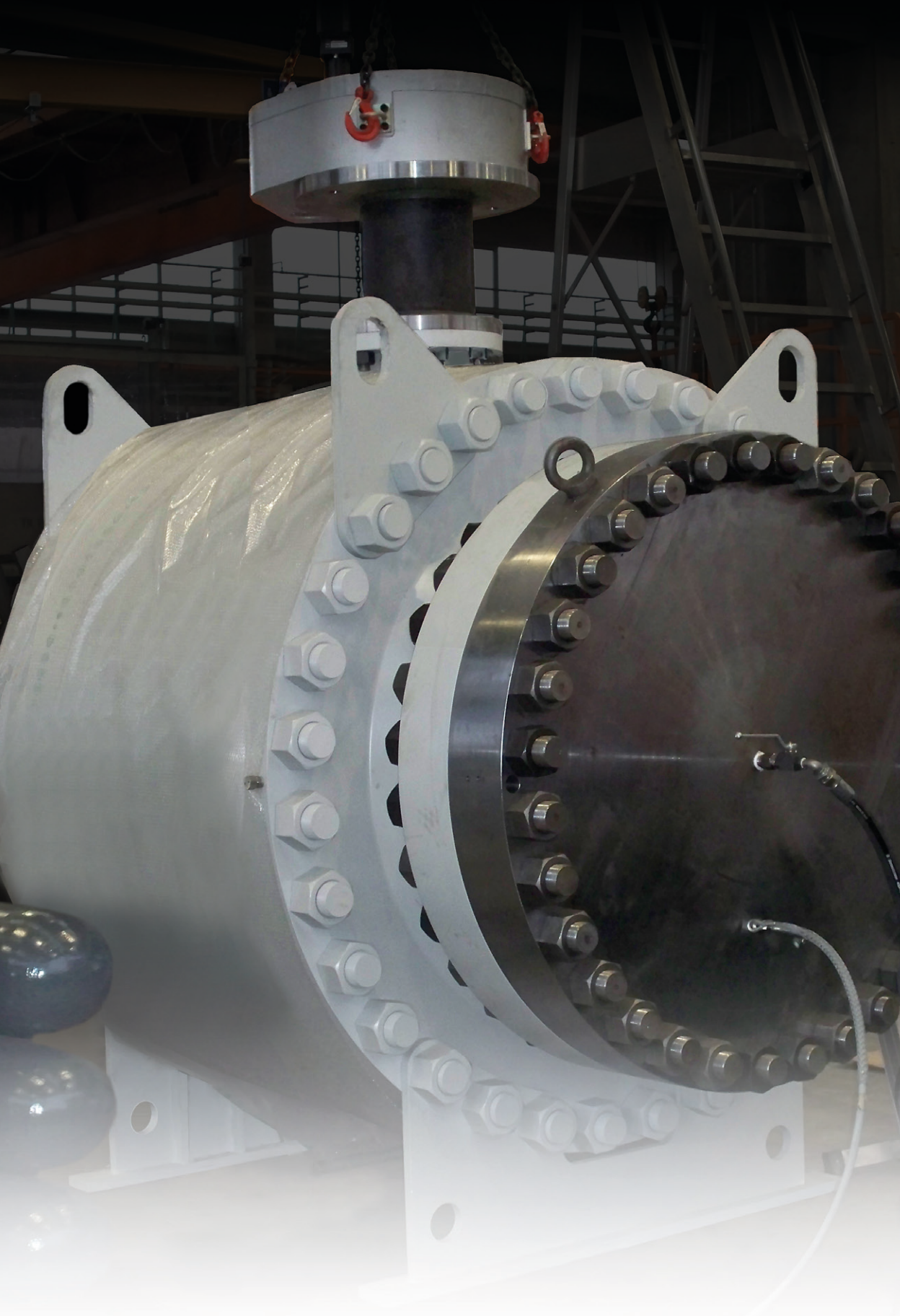
- A pre-torque and angle of rotation are specified constructively for the bolting connection.
- B The angle of rotation can be determined individually and easily with the alkitronic® HSD.

MDS

ZG

**Ball Valve Torque
Testing Equipment**

allkitronic®



make your work more transparent

Applications

Oil and gas industry is involved in the transport of hazardous chemicals. Therefore actuated valves must perform correctly and provide high performance. Ball valve manufacturers are responsible for testing and publishing valve torque data.

Comprehensive **reporting and documentation for the end user is of utmost importance**. Ball valves and actuators which do not work properly reduce safety during production processes and increase acquisition and maintenance costs significantly.

Advantages and *alkitronic*® Specials

alkitronic® MDS and ZG are ideal for testing all kinds of valves of all sizes. Our torque testing equipment consists of a sensor torque tool, an application software and an operation panel. It was customized to test 90° opening and closing cycles of ball valves with a tool torque range of central gear up to 200,000 Nm.

alkitronic® MDS and ZG outperform international standards of traceability of torque values, quality and reliability. These are **the key factors to prevent failures effectively**. **Smoothly working valves increase productivity as well as plant safety and reduce maintenance costs at the same time**. The documentation of torque values helps to **identify and avoid threatening risks** (e.g. running costs). Moreover, it enables you to prove the necessary torque to move the ball valve with different loads.

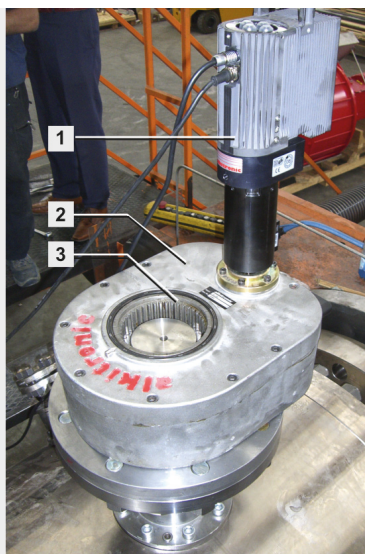
Specifications

alkitronic® ESDx 200

Sensor tool, consistent torque accuracy in all international power supplies with maintenance free, brushless synchronous motor.

Electrical data

Universal input 100 V - 253 V, frequency 45 Hz - 66 Hz
Power max. 2000 W, protection category I.



(1) Sensor torque tool *alkitronic*® ESDx 200
(2) Central gearing *alkitronic*® ZG 225
(3) Customized adaptor



alkitronic® cards OP
Operation interface with LC Display and menu guidance

- Remote control to start/stop the cycle
- Choose of parameter settings
- Data transmitting via USB

Measurement and Documentation System



alkitronic® cards OS
application software

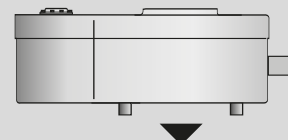


alkitronic® ESDx 200
sensor tool, suitable
for all *alkitronic*® ZG
models



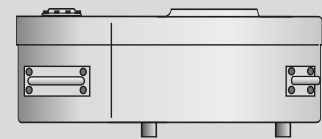
alkitronic® cards OP
operation panel

D = 54 mm

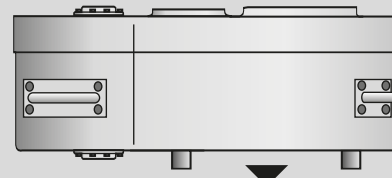


alkitronic® ZG
central gear models

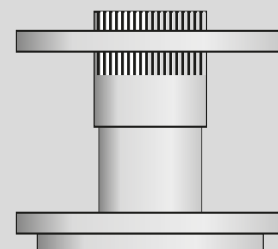
ZG 225
torques up to
22,000 Nm



ZG 1150
torques up to
90,000 Nm



ZG 1250
torques up to
200,000 Nm



Customized torque
reaction absorber

Ball valve shaft

Application Software CARDOS OS

Typical application:

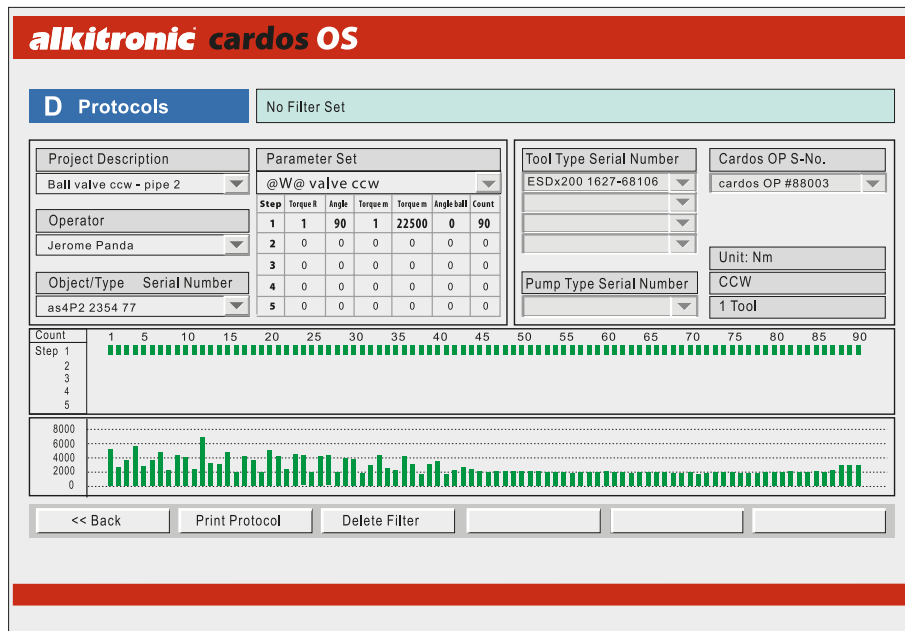
Determine breakaway torque and continuous torque of ball valves.

Features:

- Recording and documentation of torque during the valve opening or closing process
- Continuous rotation 90° CW or CCW
- Measuring increment 1°

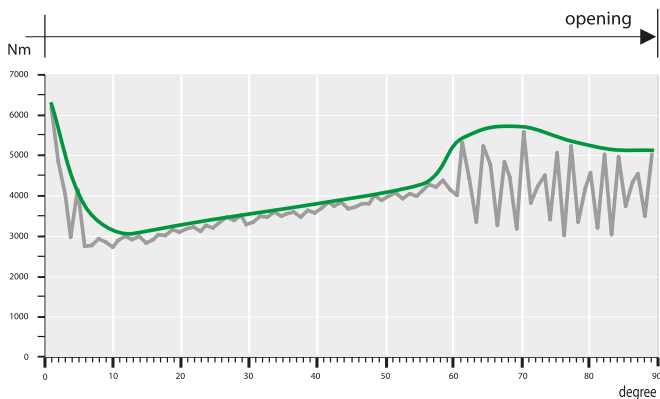
The illustration on the right shows the screen menu "D-Protocols" displaying the ball valve opening process with 90 measuring values, one for each degree.

It provides graphical and tabular data display. Data can be printed straightaway from the software interface.

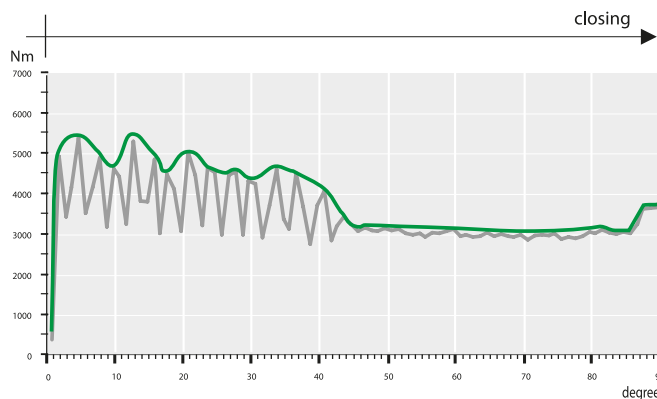


Generate Line Charts with Flattened Torque Data for Your Customers!

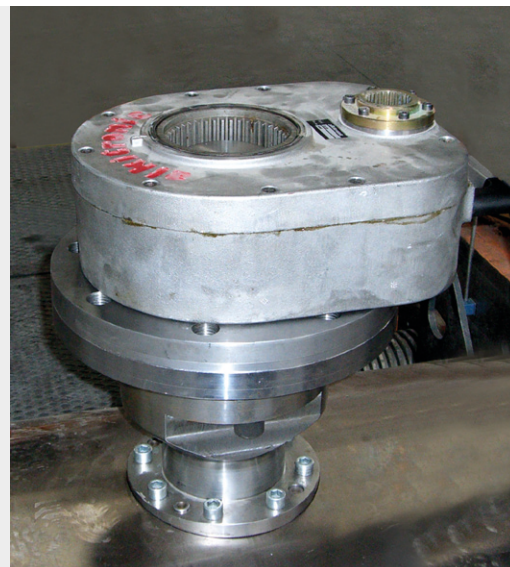
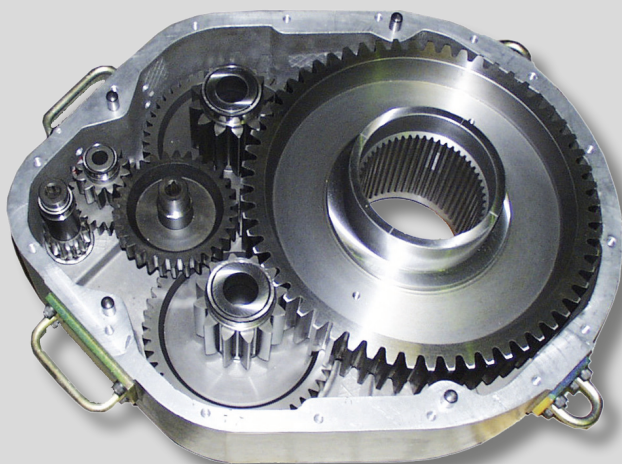
Valve opening process



Valve closing process



Inside view alkitronic® ZG 1250



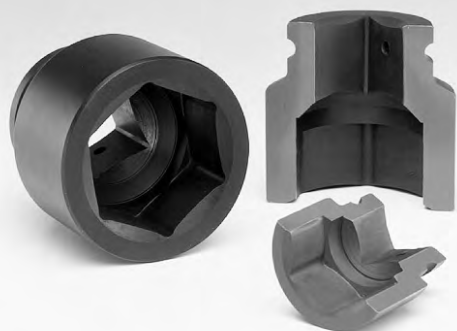
Standard Zubehör Accessories



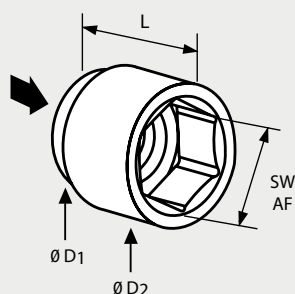
Solutions that fit your needs

alkitronic® STACO

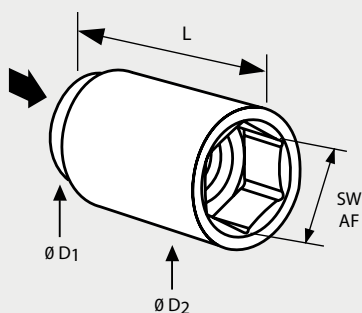
6-Kant-Standardnuss / Hex. standard sockets



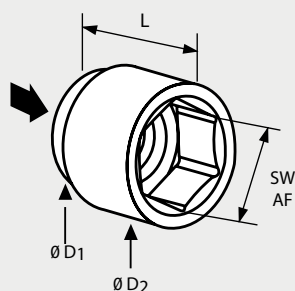
	Gummiring / Rubber Ring 	Stift / Pin 
Abtriebsvierkant / Square Drive	Bestell-Nr. / Order No.	Bestell-Nr. / Order No.
Staco 3/4"	31620	31621
Staco-L 3/4"		
Staco 1"	31520	31521
Staco-L 1"		
Staco-K 1 1/2"	31420	31421
Staco-L 1 1/2"		
Staco 2 1/2"	31425	31426



alkitronic® ➔ D1	STACO 3/4"				STACO 1"				STACO 1 1/2"			
	44 mm				54 mm				85 mm			
	SW ¹	D2 ²	L	No.	SW ¹	D2 ²	L	No.	SW ¹	D2 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	D2 ²	L	No.	SW ¹	D2 ²	L	No.	SW ¹	D2 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

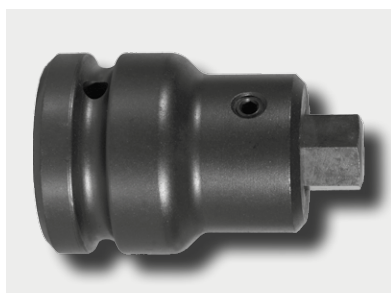


alkitronic® ➔ D1	STACO 2 1/2"				STACO 2 1/2"							
	127 mm				140 mm							
	SW ¹	D2 ²	L	No.	SW ¹	D2 ²	L	No.				
	65	106	138	31921	120	175	175	31932				
	70	113	140	31922	125	181	175	31933				
	75	119	143	31923	130	188	180	31934				
	80	125	150	31924	135	194	180	31935				
	85	132	155	31925	140	200	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				

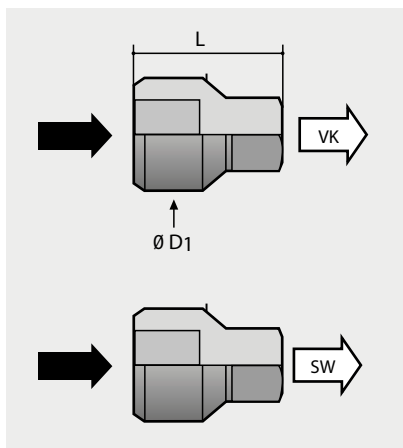
1) SW in mm / AF in mm; 2) ungefähre Maße in mm; approximate dimensions in mm

alkitronic® STABI

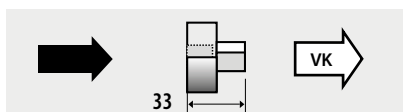
Standardverbinder / Standard connector



STABI-H		Gummiring Rubber ring	Stift Pin
Antriebsvierkant Square Drive		Bestell-Nr. Order No.	Bestell-Nr. Order No.
STABI-H	3/4"	31620	31621
SATBI-H	1"	31520	31521
STABI-H	1 1/2"	31420	31421

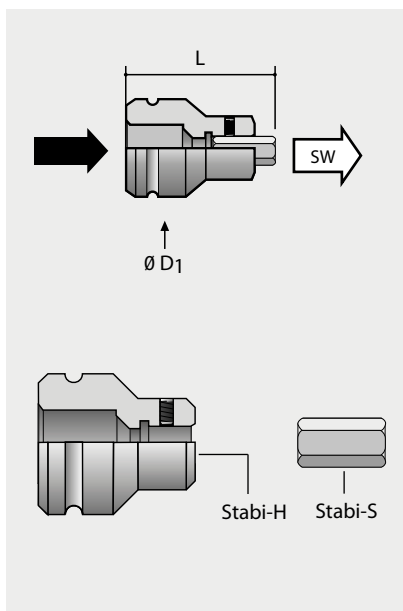


alkitronic®	STABI		STABI		STABI		STABI	
➔	3/4"		1"		1 1/2"		2 1/2"	
D1	50 mm		60 mm		78 mm		127 mm	
L	75 mm		75 mm		105 mm		156 mm	
	VK □	No.	VK □	No.	VK □	No.	VK □	No.
	1/2"	31305	3/4"	31205	1"	31105	1 1/2"	31101
	3/4"	31306	1"	31206	1 1/2"	31106		
	1"	31307	1 1/2"	31207	2 1/2"	31107		
	SW ¹ ⬡	No.	SW ¹ ⬡	No.	SW ¹ ⬡	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		
	27	31316			36	31116		



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

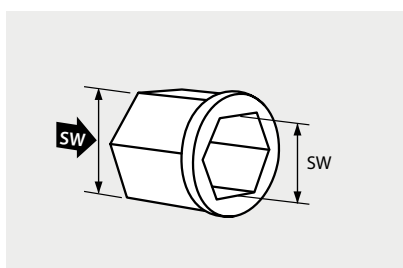
alkitronic® STABI-HALTER/STABI-STIFT Standardverbinder-H/-S / Standard connector-H/-S



alkitronic® ➡	STABI H/S			STABI H/S				STABI H/S			
	3/4"			1"				1 1/2"			
D1	48 mm			54 mm				85 mm			
L	76 mm										
	STABI-H	SW¹	STABI-S	STABI-H	L	SW¹	STABI-S	STABI-H	L	SW¹	STABI-S
	31330	12	31250	31230	85	17	31252	31130	105	19	31253
	31331	14	31251	31231	85	19	31253	31131	105	22	31254
	31332	17	31252	31232	85	22	31254	31132	105	24	31255
	31333	19	31253	31233	87	24	31255	31133	105	27	31256
	31334	22	31254	31234	87	27	31256	31134	105	30	31257
	31335	24	31255	31235	87	30	31257	31135	105	32	31258
	31336	27	31256	31236	89	32	31258	31136	108	36	31259
								31137	120	41	31260
								31138	122	46	31261
								31139	122	50	31262
								31140	122	55	31263
								31141	122	60	31264
								31142	122	65	31265

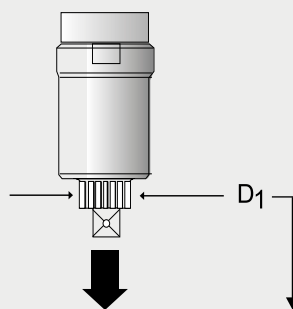
alkitronic® STA

Standardadapter / Standard adaptor



alkitronic®	STA		STA		STA		STA		STA		STA	
➔	36 mm		46 mm		55 mm		65 mm		70 mm		80 mm	
	SW ¹	No.	SW ¹	No.	SW ¹	No.	SW ¹	No.	SW ¹	No.	SW ¹	No.
	24	31705	36	31701	36	31711	36	31721	36	31731	46	31741
	27	31706	41	31702	41	31712	41	31722	41	31732	50	31742
	30	31707			46	31713	46	31723	46	31733	55	31743
	32	31708					50	31724	50	31734	60	31744
							55	31725	55	31735	65	31745
									60	31736	70	31746

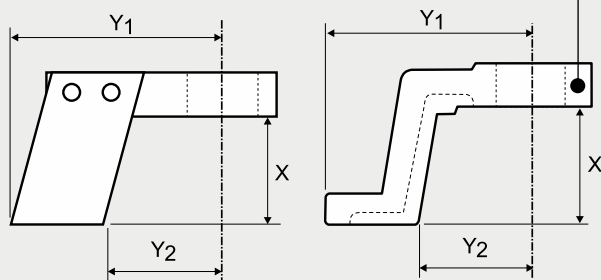
1) SW in mm / AF in mm; 2) ungefähre Maße in mm; approximate dimensions in mm



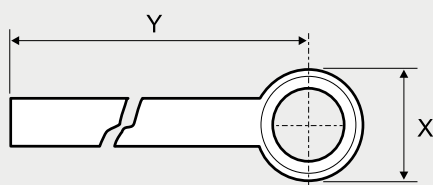
▼ Bestell-Nr. / Order No.

Abstützfuß / Reaction foot

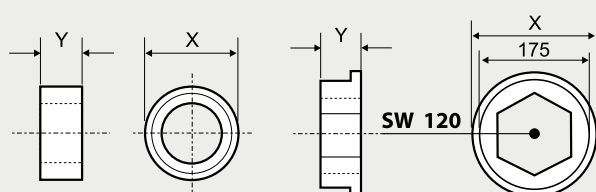
 DMA 10231
 DMA 10232

 Sicherungsschraube (optional)
 Security bolt (optional)


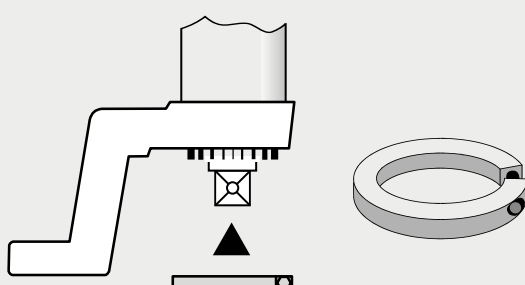
Abtriebsvierkant Square drive	mm D1	mm X	mm Y1 Y2		DMA No.
3/4"	41	74	75	51	10231
3/4"	41	128	75	51	10232
3/4"	41	65	120	70	10251
3/4"	54	83	130	85	10252
1" (*)	54	83	150	85	10253
1", 1 1/2" (**)	72	85	194	110	10254
1", 1 1/2"	72	85	194	110	10234
1 1/2"	72	123	220	120	10256
1 1/2"	91	123	220	120	10257

Gegenhalter / Toward support


	D1	X	Y	DMA No.
3/4"	41	65	240	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

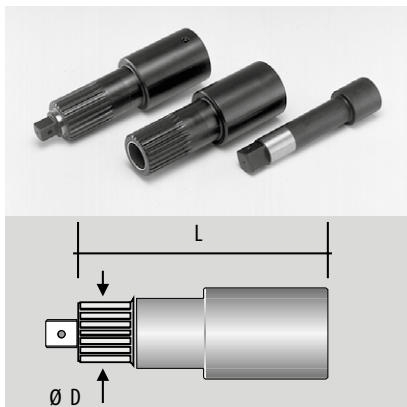
mit automatisch auslösendem akustischem Signal, eingebauter Knarre mit kleinem Nachholwinkel und einfacher sicherer Einstellung des Drehmomentwertes. Bei Verwendung als Antriebselement für unsere **alkitronic® M** - Handkraftschrauber, werden Drehmomente bis 50.000 Nm sicher und schnell beherrscht.

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®** - multiplier driver; torque output up to 50,000 Nm; robust and quick operation.

Abtriebsvierkant Square Drive	Messbereich Span	Teilstrich- kala Scale	Länge Length	Gewicht Weight	Bestell-Nr. Order No.
	Nm	Nm	mm	kg	
3/4"	40-280		680	2,3	31352
3/4"	60-420		947	3,5	31353
3/4"	100-700		1315	6,7	31354

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)	
3/4"	41	200	10285
1"	54	215	10270



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

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

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®

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Made in Germany by

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Unterlettenweg 4
85051 Ingolstadt/Germany

fon + 49 841 97499-0
fax + 49 841 97499-90
info@alkitronic.com
www.alkitronic.com

Flange Boy

The ideal aid for separating
piping flanges



saves time and money

FLANGE BOY

Application and Advantages

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

Operation instructions

Insert the **FLANGE BOY** in one of the bolt holes of a flange. Slip the bolt support plate, which is held by a chain, between the flange facings underneath the setscrew. Once the **FLANGE BOY** is jammed tight, continue turning with a wrench until a position is reached where a gasket can be replaced or a spade set. Then, slacken back the setscrew to the point where the support plate can be removed, and tap the setscrew with a hammer to free the **FLANGE BOY** from the bolt hole.

Recommend the use of two **FLANGE BOYS** in cases where the transfer of very great force is required. Insert the second **FLANGE BOY** in the corresponding hole of the companion flange. The force, applied will act on the same support plate.

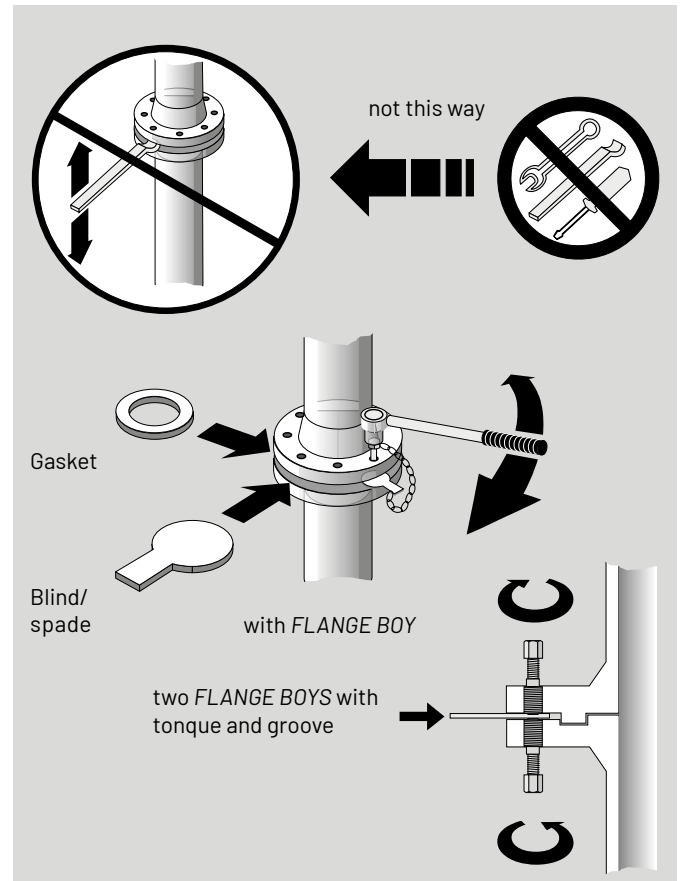
You will, thus, be able to apply heavy loads without risking damage to the support plate. Due to the flange proportions, it is not possible to increase the thickness of the support plate.

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

Grease the threads well before using!

Warning:

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

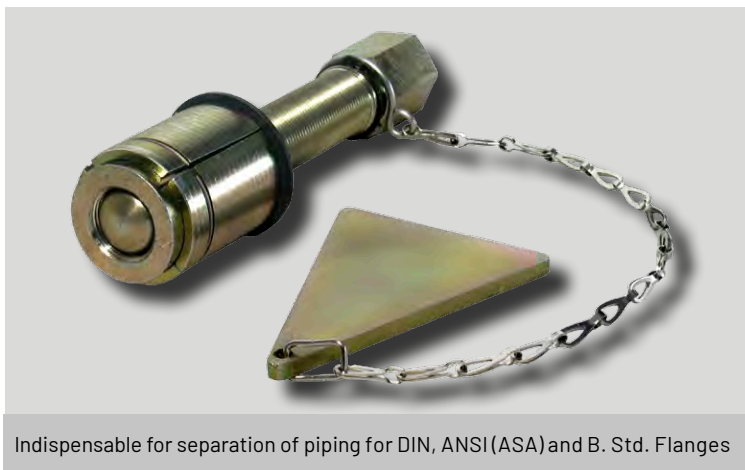


DIN Flange Dimensions (further sizes - upon request)

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, 2 1/2, 3, 4	3/4, 1, 2	3/4, 1, 1 1/4, 2		
A 7/8	22	5, 6, 8	1, 1 1/2, 2 1/2, 3, 4, 6	1 1/2, 2 1/2, 3	1/2, 3/4	1/2, 3/4
A 1	25	10, 12	8	4	1, 2, 3	1, 2
A 1 1/8	28	14, 16	10	6	1 1/2, 2 1/2	1 1/2, 2 1/2
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	



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



DBP Nr. 2522817 • US Patent No. 4015324

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Category/Drive type	Article description	Support	Carry case	Calibration certificate	Operating and service manual	Torque table	Other
Battery driven	EAF/EAFW/ EA-N	standard support arm	x	x	x		Torque chart, two batteries (5.2 Ah), battery charger, excl. torque table
Electric	EFCip/EFCip-N	standard support arm	x	x	x		Graphic display
	ECWip	standard support arm	x	x	x		Graphic display, excl. torque table
	EF, EFW	standard support arm	x	x	x		Carry handle, operating handle, Graphic display
Pneumatic	CL/CLD /CLD-N	standard support arm	x		x		Torque chart
	CLV	standard support arm	x		x	x	Torque chart
	CLS	standard support arm			x		Torque chart, excl. calibration certificate
Hydraulic	AT	standard support arm	x		x		Torque chart
	AX		x		x		Torque chart
Manual torque multiplier	H/HG	x	x		x		2 shear pins
	Missing Link/XCE Link						
Hydraulic pumps	Nova				x		Multibox, incl. hoses
	Leva				x		excl. hoses and carry case
	Velox		x		x		excl. hoses

YOUR PLUS FOR MORE PERFORMANCE

Increased quality

Premium production
Highest quality materials
Long product life cycles
Experience in bolting technology since 1984
Made in Germany – international patents

Increased precision

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

Increased productivity

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

Better service

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

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THE ELECTRICS



alkitronic XP-SERIES

THE PNEUMATICS



alkitronic XH-SERIES

THE HYDRAULICS



alkitronic XM-SERIES

THE MANUALS