



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

EXCLUSIVE DISTRIBUTOR OF

alkitronic®

HOME OF TORQUE POWER



CL SERIES

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. switching to power gear
- (is used for applying the final torque). alkitronic®
- CLS2 with fast gear for turning in and simple, quick switching to power gear (is used for applying the final torque).

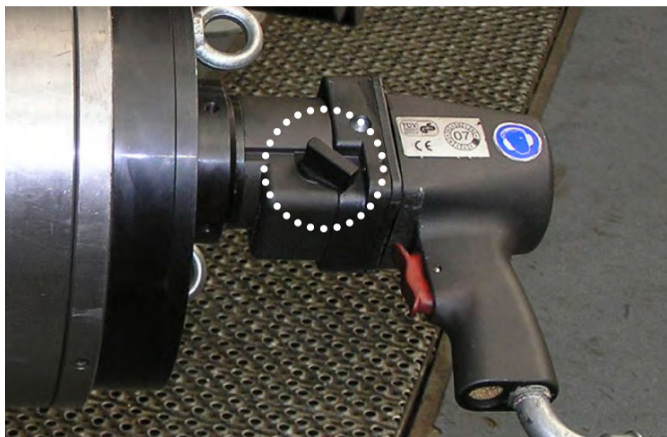
alkitronic® Specials

- Simple 1-finger operation for right/left rotation, option to enable thereaction to be locked in one position.
- Robust cast aluminum housing with proven pneumatic drive.
- Proven high-performance gears, produced in a chip-free, highprecisionprocess 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 exhauston 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®

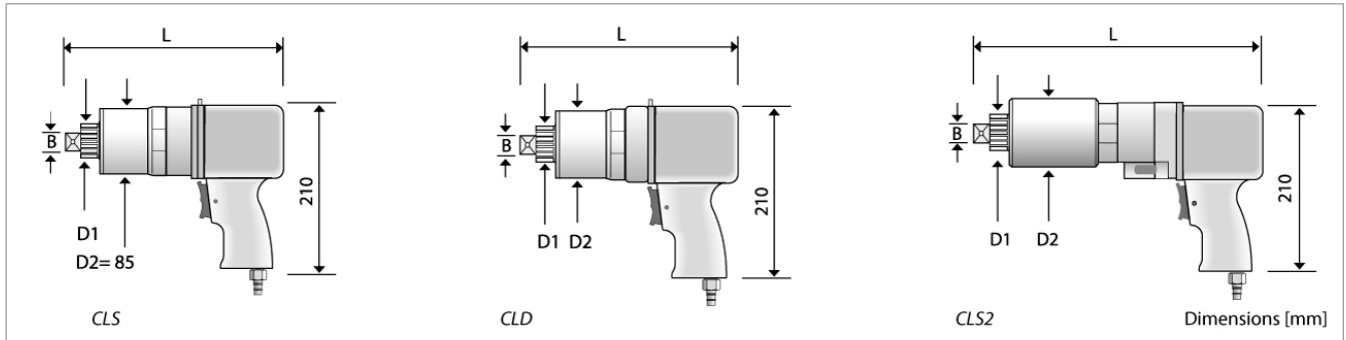


alkitronic® CLS2, 2-gear pneumatic torque multiplier. Mechanically switchable from fast gear to power gear.

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



CL SERIES



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.) D1 mm	41	41	41	41	41	41	54	54	54	54
Length (approx.) L mm	255	255	255	255	277	277	300	300	330	330
Weight without DMA (approx.) kg	6	6	6	6	7	7	8	8	8,5	8,5
Idle speed rpm	60	38	34	27	19	13	9	7	6	4

Models 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.) D1 mm	41	41	41	54	54	54	72	72	72	91
Diameter (approx.) D2 mm	85	85	85	85	85	85	98	109	133	173
Length (approx.) L mm	275	275	275	300	300	300	320	350	350	370
Weight without DMA (approx.) kg	7	7	7	7	8,5	8,5	10,5	13	15	25
Idle speed rpm	19	13	9	7	5	4	3	2	1,5	1

Models 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.) D1 mm	41	54	54	72	72	72	91		
Diameter (approx.) D2 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.



PNEUMATIC SERIES

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PC-N SERIES

Applications

Pneumatic 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.

CLD-N, pneumatic driven Models:

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

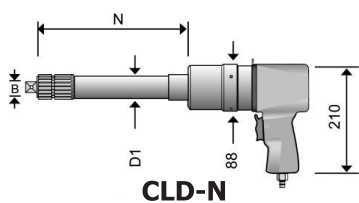


Technical Data: N-Tools

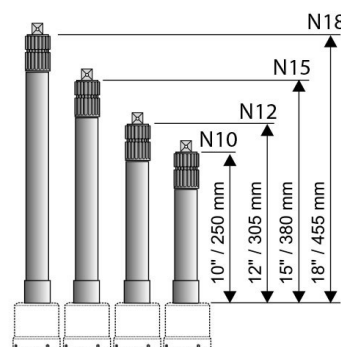
Drive	pneumatic	
Model N-Tool (-N)	CLD225	CLD280
Torque range * Nm	900-2700	1200-3500
Square drive B	1"	1"
Diameter (approx.) D1 mm	56	56
Length extension N.. inch (e.g. EFA2/80 N12)	N12 N18	N12 N18
Idle speed 1st Gear 2nd Gear rpm	5	4

*) 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



PC-R & PC-SG SERIES

alkitronic®

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.

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.

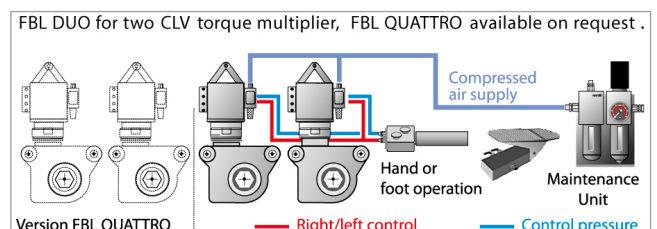
For highly efficient bolting connections with one or up to four alkitronic® CLV torque multipliers, preconfigured alkitronic® Remote Systems are already available.



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



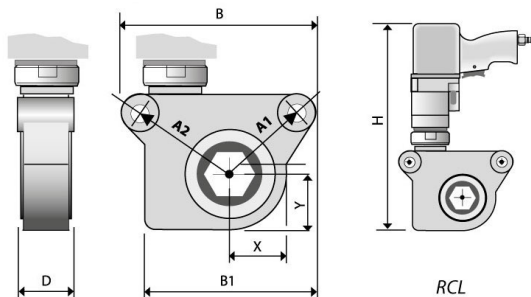
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PC-R & PC-SG SERIES

Technical Data

Dimensions [mm] alkitronic® Radial Gearing (R)



Standard Adapter



STA 80 / AF

36 mm

46 mm

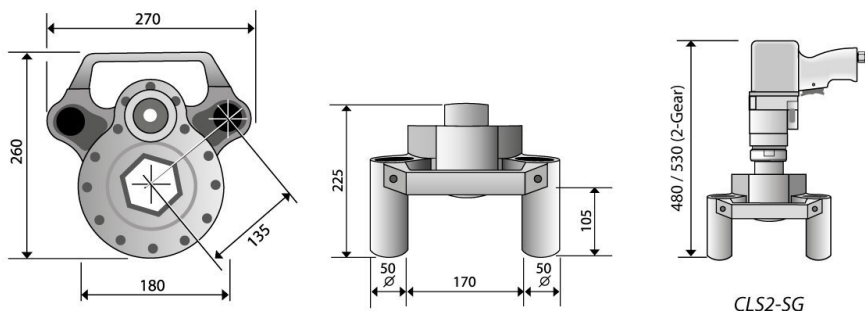
55 mm

65 mm

Radial Gearing Models		Pneumatic drive	
		RCL	
Type		RCL 36p	RCL 80p
Torque range 2nd gear (approx.)	Nm	160-470	670-1975
Torque range 1st gear (approx.)	Nm	500-1500	1645-4840
Width across flat (AF)	mm	36	80
Height (approx.)	H mm	400	450
Width (approx.)	B/B1 mm	230/190	325/240
Bolt distance (approx.)	A1/A2 mm	100/128	156/194
Dimensions (approx.)	X/Y mm	56/56	98/98
Dimension (approx.)	D mm	90	94
Weight (approx.)	kg	11	21
Idle speed 1st gear (approx.)	rpm	5	4
Idle speed 2nd gear (approx.)	rpm	15	12

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

Dimensions [mm] alkitronic® Tangential Gearing (SG)



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

PC-SD SERIES Integrated torque sensor

alkitronic®

Applications

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

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

Advantages

General

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

alkitronic® HSD

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

alkitronic® CLSD

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

alkitronic® EASD

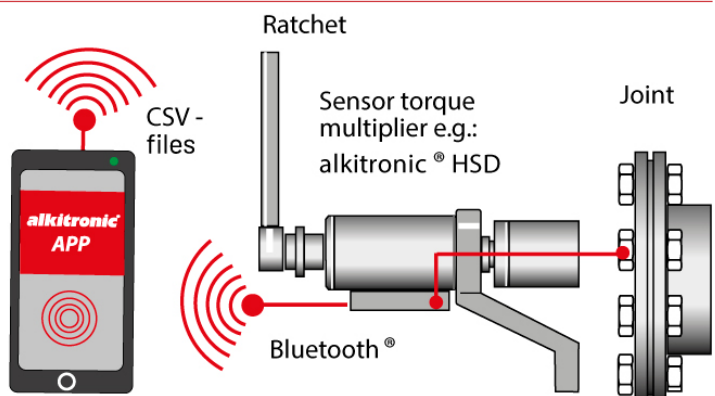
- Health preserving: ergonomically designed, low noise emission.
- No noise protection necessary.
- Powerful and independent: Two lithium-ion battery packs ensure up to 360 screw joints in a row.
- Exact shut-off torque even at low battery levels.

alkitronic® specials

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

alkitronic® APP application scheme

- alkitronic® APP app for iOS® and android® mobiles and platform independent data exchange via CSV file transfer.
- Image on the upper right: alkitronic® HSD and on the lower right: alkitronic® CLSD and alkitronic® EASD.



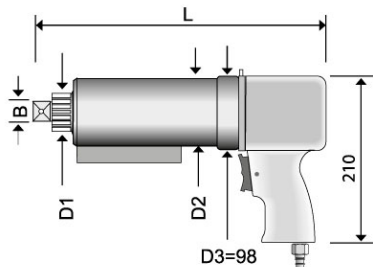
PNEUMATIC SERIES

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PC-SD SERIES Integrated torque sensor

Technical Data

Dimensions [mm] alkitronic® Tntegrated torque sensor (SD)



alkitronic® CLSD

Type		Pneumatic drive		
		CLSD 100	CLSD 200	CLSD 400
Measuring range approx.	Nm	100-1000	200-2000	400-4000
Power (max)	Nm	1000	2000	4000
Square drive	B	1"	1"	1 1/2"
Diameter (approx.)	D1	mm	54	72
Diameter (approx.)	D2	mm	88	98
Length (approx.)	L	mm	360	410
Weight without DMA approx.kg			10	11,25
Idle speed gear I	r/min	11	5	3,5
Idle speed gear II	r/min	-	-	-

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

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

- Tightening with specified torque
 - Torque controlled bolting, bolt connections with target values and tolerance levels.
- Tightening with torque/angle procedure
 - Pre-torque and angle can be preset.
 - Tolerance specification for the final torque (control of bolting quality).
 - Storage of actual torque and angle.
- Checking of torque
 - Monitoring of already tightened bolt connections.

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

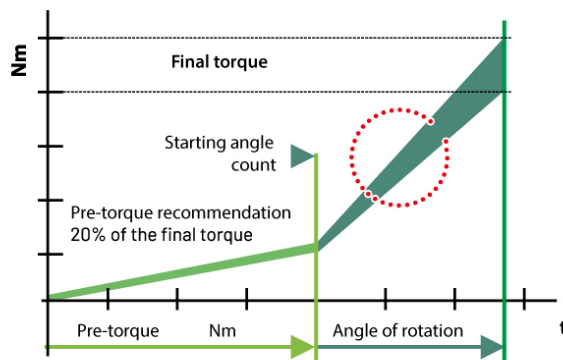
Example for menu-guided operation (HSD)



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.