formance. Without Cables.

Expansion Platform for Optional Accessories

- ■ Barcode scanner (order no.: 937240PT)
  Makes possible real-time barcode data acquisition
- ■ Adjustable auto parameter selection
  configuration option for enable and disable
- ■ Tag/sensor for various
  locating systems possible (on request)
- ■ Individual customer-specific
  expansion solutions possible

Scanner 937240PT (optional)

Configurable LED joint illumination

Operator display

- ■ Operator information in real-time
- ■ 3-line adjustable LCD display
- ■ Status indications:
  - • Green LCD = IO
  - • Yellow LCD = in operation
  - • Red LCD = NOK / error
  - • Green LED = OK
  - • Red LED = NOK
- ■ Configurable application buttons

Modular Fastening System

Local WLAN network

Apex Torque Net

Remote monitoring/ programming

Ethernet TCP/IP

Fieldbus I/O

PLC system

Livewire

Up to 16 cordless right angle/ pistol grip nutrunners on one controller

Cleco

mPro400

BTS power supply

Intelligent inline floating spindle nutrunners BTS series

Cordless WLAN torque wrench

Corded right angle nutrunner

One nutrunner controller can acquire up to 16 combined fastening tools and control them based on the process.

The Most Cost-Effective Solution for Safety-

Savings of up to 50 % Compared to Conventional Systems!

Mobility is one of the main advantages of wireless communication. LiveWire™ from Cleco combines the freedom and flexibility of cordless tools in fastening applications where documentation is required. By using a 2.4 GHz/5 GHz WLAN (Wireless Local Area Network) interface (industry standard) as well as the highest level security encryption and authentication plus 512-cycle tool buffer memory, LiveWire™ ensures safety-critical data transmissions are never jeopardised.

Up to 16 LiveWire Tools * 1 Line Controller

Contact Regional Application Center for requirements greater than 10.

Critical Screwed Joints on the Market.

Up to 83% More Productivity!

Cleco LiveWire™ tools are also available with Vmax™, a corded solution that offers lasting tool performance and increases the speed by up to 83 % without compromising accuracy or service life. These innovations operate on the same principle using which up to 10 tools are controlled by one nutrunner controller. In this way up to 50 % of the costs are saved compared to conventional systems. The new Vmax™ technology also takes into account the power supply used and immediately regulates the maximum tool speed. LiveWire™ with Vmax™ combines the performance you need with one of most versatile cordless systems on the market.
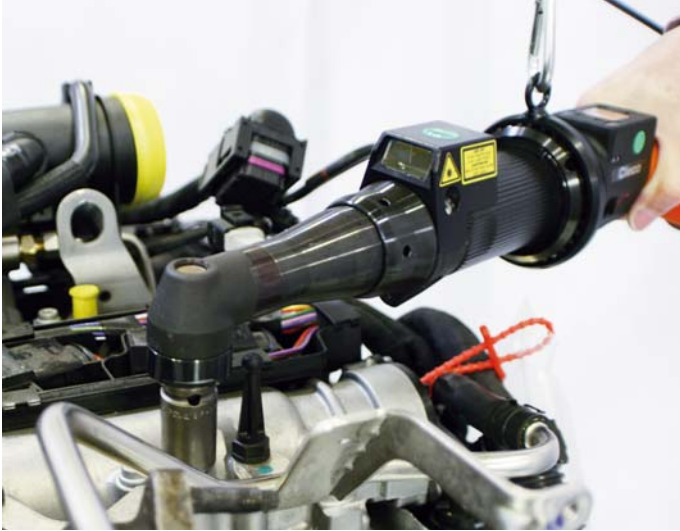
WLAN Tech. Data / Options:

Features	2.4 & 5 GHz Tools with LiveWire Memory Chip* 17B... and 47B... Series
Standard	IEEE 802.11a/b/g/h/n
Security	WEP • 64/128-bit encryption
	WPA/WPA2/802.1x 128-bit TKIP/CCMP encryption • Pre-shared key mode (PSK) LEAP, PEAP • 802.1x EAP authentication (LEAP, PEAP, TLS, TTLS GTC, MD5, OTP, PAP, CHAP, MSCHAP, SCHAPv2, TTLS MSCHAPv2) on request
Range	Typically up to 50 m (164' 0.5")
Canals	1 – 13 (2.401 – 2.483 GHz) 36 – 165 (5.17 - 5.825 GHz)
Transmit power	15 dBm @ 5GHz 20 dBm @ 2 .4 GHz (b)
Sensitivity	-94 dBm (@1 Mbps) -80 dBm (@ 5 GHz)
Modulation	DSSS/OFDM

* All important WLAN settings incl. the individual MAC addresses are stored in the interchangeable LiveWire memory chip. This feature permits, even in a secured WLAN, straightforward, quick tool replacements by simply changing the LiveWire memory chip.

Numerous Application-

Cordless Right Angle Nutrunner for Motor Assembly

Fastening accessories using a Cleco right angle nutrunner incl. tool bail on a balancer.

47BAYSB35AM3 with 936400PT

Straightforward Fastening using LiveWire Pistol Grip Nutrunner

Fastening armrest using a Cleco pistol grip nutrunner.

17BPYSB13Q

Safety-Critical Fastening Using A LiveWire Right Angle Nutrunner

Seat frame fastening using Cleco LiveWire right angle nutrunner at a well-known international vehicle seat manufacturer.

47BAYSB28AM3

Areas for LiveWire Tools

Cleco LiveWire fastening tools at the Austrian sports car manufacturer KTM in Graz. LiveWire right angle and pistol grip nutrunners together with a cordless electronic torque wrench on a common nutrunner controller. Cordless productivity for all safety-critical joints on the premium sports car X-Bow.

Cleco LiveWire I-Wrench

WLAN torque wrench in professional case. Can be perfectly integrated into Cleco LiveWire systems and works together with Cleco LiveWire nutrunners and Cleco/DGD nutrunner controllers.

LiveWire 2 Right Angle Nutrunners

Torque range	**Bolt size**
5.5 - 50 Nm	**M5 - M10**

- About 360 g lighter than LiveWire tools
- Flexible expansion platform
- Brushless precision motor
- Exact torque measurement by transducer
- Integrated intelligent functions with power management and I/O signal processing
- Integrated servo

Nomenclature for weight-reduced LiveWire 2 right angle nutrunners

47	B	A	Y	P	B	XXX	XXX	X	L

Motor
47

Supply
B – Battery/ PM48

Version
A – Right angle

Data Transfer
Y – WLAN: Dual band 2.4 GHz, 5 GHz

Peripherals
P – Expansion platform

Version
B – 26–48 V

Max. Torque Nm
15 - 15 Nm 35 - 35 Nm
21 - 21 Nm 50 - 50 Nm
28 - 28 Nm

Output Drive Size
AM3 – 3/8" square drive

Tool Series
L – LiveWire 2 Series

Output Drive Locking
– Pin locking
B – Ball locking

LiveWire 2 Right Angle Nutrunner	Torque Range	Free Speed (rpm)			Weight without Battery	Output Drive Size Square Drive	Length incl. Battery	
		Battery Types		PM48			26 V	44 V
Model Number	**Nm**	**26 V***	**44 V***	**48 V**	**kg**		**mm**	
47BAYPB15AM3L	5.5-15	538	983	983	1.83	3/8"	563	544
47BAYPB21AM3L	8-21	411	751	751	1.83	3/8"	563	544
47BAYPB28AM3L	10-28	291	532	532	1.83	3/8"	563	544
47BAYPB35AM3L	12-35	244	447	447	2.09	3/8"	595	576
47BAYPB50AM3L	18-50	168	293	293	2.11	3/8"	603	582

*Free speeds with fully charged battery.

General: All tools must be used with a suitable Cleco/DGDnutrunner controller or PC software solution.

Weight of the batteries 26-V Li-ion battery 0.50 kg, 44V Li-ion battery 0.85 kg

Optional accessories: Batteries, battery chargers, scanner, sockets and bits are not included in the standard equipment. You will find all accessories on pages 133 and 134 of this catalogue.

LiveWire Right Angle Series

Torque range	Bolt size
5.5 - 70 Nm	**M5 - M10**

- Brushless precision motor
- High-resolution resolver
- Exact torque measurement by transducer
- Integrated electronic intelligence with power management and I/O signal processing
- Integrated servo

47BAYSB28AM3

LIVE**WIRE**™

Right angle nutrunner nomenclature

47	B	A	X	X	B	XXX	XXX	X

Motor
47

Supply
B- Batt./PM48

Tool Version
A – Right angle

Data Transfer
Y – WLAN: Dual band 2.4 GHz, 5 GHz
Z – Xbee: IEEE 802.15.4 (4 tools per access point)

Peripherals
S – Barcode scanner
– None

Input Voltage
B – 26–48V

Output Drive Size
AM3 – 3/8" Sq. dr.
P4 – 1/2" Sq. dr.

Max. Torque (Nm)
15 - 15 Nm   35 - 35 Nm
21 - 21 Nm   50 - 50 Nm
28 - 28 Nm   70 - 70 Nm

Output Drive Locking
– Pin locking
B – Ball locking

Right Angle Nutrunner	Torque Range	Free Speed (rpm)			Weight Without Battery	Output Drive Size Square	Length with Battery	
		Batteries		PM48			26 V	44 V
Order No.	Nm	26 V*	44 V*	48 V	kg		mm	
47BAYSB15AM3	5.5-15	538	983	983	2.20	3/8"	554	535
47BAYSB21AM3	8-21	411	751	751	2.20	3/8"	554	535
47BAYSB28AM3	10-28	291	532	532	2.20	3/8"	568	549
47BAYSB35AM3	12-35	244	447	447	2.46	3/8"	600	581
47BAYSB50AM3	18-50	168	293	293	2.48	3/8"	608	589
47BAYSB70P4	24-70	123	216	216	4.18	1/2"	691	672

*Free speed with fully charged battery.
General: All tools must be used with a suitable Cleco/DGDnutrunner controller or PC software solution.
Weight of the batteries 26-V Li-ion battery 0.50 kg, 44V Li-ion battery 0.85 kg

Optional accessories: Batteries, battery chargers, scanner, sockets and bits are not included in the standard equipment. You will find all accessories on pages 133 and 134 of this catalogue.

Cordless Pistol Grip Nutrunners with Transducer

17BPYSB13Q

(The Apex μ-Guard bit shown above is not included the standard equipment.)

Pistol Grip Series

Torque range	Bolt size
3.0 - 13 Nm	**M5 - M6**

- Brushless precision motor
- High-resolution resolver
- Exact torque measurement by transducer
- Integrated electronic intelligence with power management and I/O signal processing
- Integrated servo

Pistol grip nutrunner nomenclature

17	B	P	X	X	B	XX	Q

Motor
17

Supply
Battery/PM48

Tool Version
P – Pistol grip

Data Transfer
– WLAN: Dual band 2.4 GHz, 5 GHz
– Xbee: IEEE 802.15.4 (4 tools per access point)

Options
S – Barcode scanner
– None

Input Voltage
B – 26–48V

Type of Output Drive
Q – Quick-change chuck

Max. Torque (Nm)
0.5 - 5 Nm
0.7 - 7 Nm
0.9 - 9 Nm
13 - 13 Nm

Pistol Grip Nutrunner	Torque Range	Free Speed (rpm)			Weight w/o Battery	Output Drive Size Hex	Length	Height with Battery & Scanner	
		Batteries		PM48				26 V	44 V
Order No.	Nm	26 V*	44 V*	48 V	kg		mm	mm	
17BPYSB05Q	3-5	1639	2428	2428	1.52	1/4"	220	330	318
17BPYSB07Q	3-7	1161	1721	1721	1.52	1/4"	220	330	318
17BPYSB09Q	3-9	887	1314	1314	1.52	1/4"	220	330	318
17BPYSB13Q	3-13	629	931	931	1.52	1/4"	220	330	318

*Free speed with fully charged battery.
All tools must be used with a suitable Cleco/DGDnutrunner controller or PC software solution.
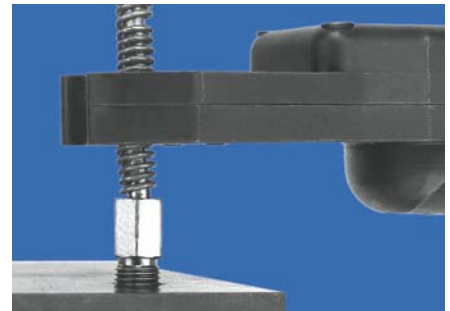Weight of the batteries 26-V Li-ion battery 0.50 kg, 44V Li-ion battery 0.85 kg

Batteries, battery chargers, scanner, sockets and bits are not included in the standard equipment. You will find all accessories on pages 133 and 134 of this catalogue.

Tube Nut Series

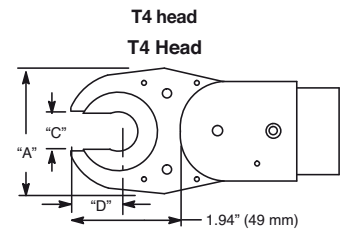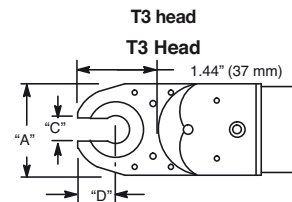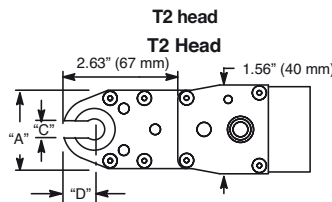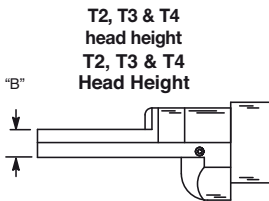| Torque range	Bolt size
10 - 40 Nm	M6 - M8

- Brushless precision motor
- High-resolution resolver
- Exact torque measurement by transducer
- Integrated electronic intelligence with power management and I/O signal processing
- Integrated servo

T3

T4

LiveWire™

On the 47BT tube nutrunner a single lever controls the tightening of the fastener and the return of the hex socket to the open position. This flexibility paired with proven performance significantly increases productivity during assembly.
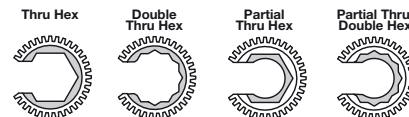
47BTYSB20T2

T2, T3 & T4 head height
T2, T3 & T4 Head Height
"B"

T2 head
T2 Head
2.63" (67 mm)   1.56" (40 mm)
"A" "C"
"D"

T3 head
T3 Head
1.44" (37 mm)
"A" "C"
"D"

T4 head
T4 Head
"C"
"A"
"D"
1.94" (49 mm)

Tube nutrunner nomenclature

47	B	T	X	X	X	XX

Motor
47

Supply
B– Batt./PM48

Tool Version
T – Tube nut wrench

Data Transfer
Y – WLAN: Dual band 2.4 GHz, 5 GHz
Z – Xbee: IEEE 802.15.4
(4 tools per access point)

Options
S – Barcode scanner
– None

Input Voltage
B-26V-48V

Head Size
T2 - 20 Nm
T3 - 30 Nm
T4 - 40 Nm

Socket Sizes

EA - 1/4"	M5 – 5 mm	MH – 14 mm	MP – 22 mm
EC – 3/8	M6 – 6 mm	MI – 15 mm	MQ – 23 mm
EE – 1/2	MA – 7 mm	MJ – 16 mm (5/8")	MR – 24 mm (15/16")
EF – 9/16	MB – 8 mm (5/16)	MK – 17 mm	MS – 25 mm
EH – 11/16	MD – 10 mm	ML – 18 mm	MT – 26 mm
EJ – 13/16	ME – 11 mm (7/16)	MM – 19 mm (3/4")	MU – 27 mm (1 1/16")
EK – 7/8	MF – 12 mm	MN – 20 mm	
EM – 1	MG – 13 mm	MO – 21 mm	

Socket identifier

KSX	XX	XX	X

Head Size
KS2 – T2
KS3 – T3
KS4 – T4

Type of Output Drive
0 -Partial thru hex   2 - Double thru hex
1 - Thru hex   3 - Partial double thru hex

Extensions
0 – Flush   4 – 1/2"
2 – 1/4"   6 – 3/4"

Max. Hex Socket Sizes
MG, EE   T2 head version
MM, 3/4"   T3 head version
MU, 1 1/16"   T4 head version
00, ## (special)   All head versions

Thru Hex   **Double Thru Hex**   **Partial Thru Hex**   **Partial Thru Double Hex**

Tube Nutrunner	Torque Range	Free Speed (rpm)			Weight w/o Battery	Output Drive Size	Length with Battery		Head			
		Batteries		PM48			26 V	44 V	A	B	C	D
Order No.	Nm	26 V*	44 V*	48 V	kg		mm	mm	mm	mm	mm	mm
47BTYSB20T2	10-20	260	455	455	2.57	1/2"	598	579	36	14	7	13
47BTYSB30T3	15-30	188	329	329	2.57	3/4"	588	569	42	15	12	19
47BTYSB40T4	20-40	141	247	247	2.93	1 1/16"	612	593	60	15	17	24

*Free speed with fully charged battery.
General: All tools must be used with a suitable Cleco/DGDnutrunner controller or PC software solution.
Weight of the batteries 26-V Li-ion battery 0.50 kg, 44V Li-ion battery 0.85 kg

Optional accessories: Batteries and battery chargers are not included the standard equipment. You will find all accessories on pages 133 and 134 of this catalogue.

For special versions of sockets, please use the prefix "KS" (e. g.: KS2EA01 for a T2 head, 1/4", flush, thru hex)

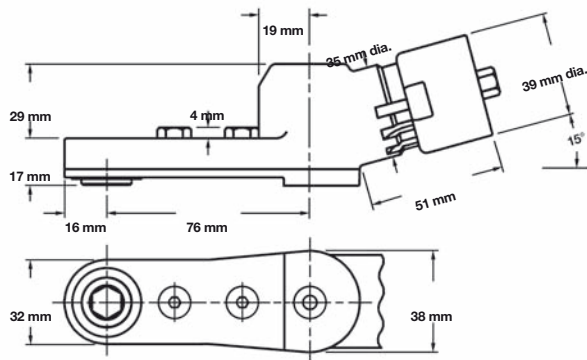# Cordless Crowfoot Nutrunners With Transducer

Crowfoot Series

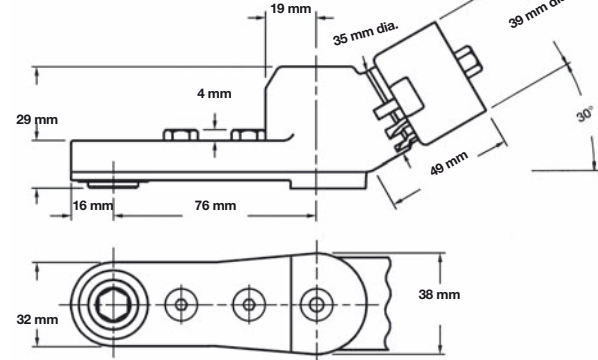| Torque range	Bolt size
10.5 - 30 Nm	M6 - M8

- Brushless precision motor
- High-resolution resolver
- Exact torque measurement by transducer
- Integrated electronic intelligence with power management and I/O signal processing
- Integrated servo

Livewire™

47BCYSB30C1

C1 – 15° head (order no. 301071)
Maximum recommended torque: 30 Nm

C3 – 30° head (order no. 301072)
Maximum recommended torque: 30 Nm

Crowfoot nutrunner nomenclature

47	B	C	X	X	B	XX

Motor
47

Supply
B - Batt./PM48

Tool Version
C – Crowfoot nutrunner

Data Transfer
Y – WLAN: Dual band 2.4 GHz, 5 GHz
Z – Xbee: IEEE 802.15.4 (4 tools per access point)

Options
S – Barcode scanner
– None

Input Voltage
B – 26V-48V

Head Version
C1 - 15°
C3 - 30°

Socket identifier

CS	XX	X	X

Head
CS – Crowfoot

Type of Output Drive
1 – Thu hex

Extensions
0 – Flush   4 – 1/2"   6 – 3/4"

Socket Sizes

EA - 1/4"	MA – 7 mm	MF – 12 mm
EC – 3/8	MB – 8 mm (5/16)	MG – 13 mm
EE – 1/2	MC – 9 mm	MH – 14 mm
EF – 9/16	MD – 10 mm	MI – 15 mm
	ME – 11 mm (7/16)	

Crowfoot Nutrunner	Torque Range	Free Speed (rpm)			Weight Without Battery	Output Drive Size	Length with Battery	
		Batteries		PM48			26 V	44 V
Order No.	Nm	26 V*	44 V*	48 V	kg	mm	mm	
47BCYSB30C1	10.5-30	186	326	326	2.81	15	667	648
47BCYSB30C3	10.5-30	186	326	326	2.81	15	660	641

* Free speed with fully charged battery.
General: All tools must be used with a suitable Cleco/DGDnutrunner controller or PC software solution.
Weight of the batteries 26-V Li-ion battery 0.50 kg, 44V Li-ion battery 0.85 kg

Optional accessories: Batteries and battery chargers are not included the standard equipment. You will find all accessories on pages 133 and 134 of this catalogue.

For special versions of sockets, please use the prefix "CS" (e.g.: CSEE01 for 1/2", flush, thru hex)