

Cleco[®]
LiveWire[™]

Cordless Solutions for Critical Fastening



Up To 16* LiveWire™ Tools. 1 Line Controller.



* Contact Regional Application Center for requirements greater than 10.

WLAN Technical 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 <ul style="list-style-type: none"> • 64/128 bit encryption WPA/WPA2/802.1x 128 bit TKIP/CCMP encryption <ul style="list-style-type: none"> • 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 164' (50 m)
Channels	1 – 13 (2.401 – 2.483 GHz) 36 – 165 (5.17 – 5.825 GHz)
Transmission rate (power):	15 dBm @ 5 GHz 20 dBm @ 2.4 GHz (b)
Sensitivity	-94 dBm (@ 1 Mbps) -80 dBm (@ 5 GHz)
Modulation	DSSS/OFDM

Save Up to 50% Over Traditional Systems

Mobility is a major advantage with wireless communications. Cleco® LiveWire marries the freedom and flexibility of cordless tools with real-time wireless error proofing. Utilizing a 2.4 GHz/5 GHz WLAN (Wireless Local Area Network) interface in conjunction with the highest security encryption and authentication levels, plus a 512 cycle tool memory buffer, LiveWire delivers the industry standard in wireless connectivity and performance for your safety and production critical data transmissions.

LiveWire & LiveWire 2 - Features & Comparison

LiveWire offers precision torque, angle and speed control features for safety critical fastening in an ergonomic, wireless design. With up to 1,700 rundowns per battery charge or continuous power, your safety critical applications are assured to never run out of power. LiveWire has been designed and tested to provide wireless connectivity across the harshest of machine-to-machine environments.

LiveWire 2 offers the same precision torque, angle, and speed control features for safety critical fastening as LiveWire but in a lightweight composite housing.

LED Headlight

3 user programmable headlight settings

Operator Display

- LCD Display with real-time information
- LED Status Indicators
- Two configurable buttons

Performance

- Optimized 5 GHz performance
- Dual-Antenna system
- Uniband 3 support

Electronic Intelligence

- On-board power management
- Integrated servo with I/O signal handling
- Auto-sensing power
- 512 cycle memory buffer

LMC

The interchangeable LiveWire memory chip stores tool specific WLAN information (MAC address, IP address, SSID, etc...) that allows for easy spare tool changeover with minimal downtime

Cleco Cordless LiveWire Tools

5.5 – 90 Nm

- Up to 90 Nm capacity
- Wi-Fi & XBee communication
- Available as Angle Pistol, Straight, Tubenut & Crowfoot versions
- Standard & Platform versions



Cleco Cordless LiveWire 2 Tools

5.5 – 65 Nm

- 360 g (3/4 lbs) lighter
- Up to 65 Nm capacity
- Wi-Fi communication
- Platform versions
- Available as Angle versions

Better Performance With P-Series Angle Heads

The 'P' series of angle heads were designed to meet the rigorous production standards of the automotive industry.

Durable, precision, spiral cut gears extend preventive maintenance intervals to 500,000 cycles, nearly twice our previous design.

Dimension	11.98 mm				18.44 mm				21.05 mm				25.40 mm				30.48 mm				38.10 mm				50.80 mm			
	100mm	150mm	200mm	250mm	100mm	150mm	200mm	250mm	100mm	150mm	200mm	250mm	100mm	150mm	200mm	250mm	100mm	150mm	200mm	250mm	100mm	150mm	200mm	250mm				
Overall Length	100	150	200	250	100	150	200	250	100	150	200	250	100	150	200	250	100	150	200	250	100	150	200	250				
Overall Width	100	150	200	250	100	150	200	250	100	150	200	250	100	150	200	250	100	150	200	250	100	150	200	250				
Weight	1.2	1.8	2.4	3.0	1.5	2.2	2.9	3.6	1.8	2.7	3.6	4.5	2.0	3.0	4.0	5.0	2.2	3.3	4.4	5.5	2.5	3.7	4.9	6.1				
Material	Al	Al	Al	Al	Al	Al	Al	Al	Al	Al	Al	Al	Al	Al	Al	Al	Al	Al	Al	Al	Al	Al	Al	Al				
Finish	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black				
Part Number	100-001	150-001	200-001	250-001	100-002	150-002	200-002	250-002	100-003	150-003	200-003	250-003	100-004	150-004	200-004	250-004	100-005	150-005	200-005	250-005	100-006	150-006	200-006	250-006				

This design achieves a higher degree of machine capability with all tools being qualified to a Cm/Cmk value greater than 2.0 at +/- 7%.



One Platform for all Accessories

The modular accessory platform is now standard for both the LiveWire and LiveWire 2 series tools allowing accessory modules to be added or changed without having to disassemble and reassemble the tool.



By adding an on-board gyroscope the tool is able to compensate for operator influence that might affect an angle controlled or monitored rundown.



The tool location module is used to define the work area of a tool to a specific product or area on the assembly line.



Using an on-board scanner eliminates the need for a third-party corded scanner. This allows the operator to stay in-station and select the correct application by scanning a VIN, serial number, or image, while also being able to lock out the tool in the event of an incorrect scan.

LiveWire Cordless Transducer Control

LiveWire Right Angle Series

Torque range
5.5 - 90 Nm
4.1 - 66.4 ft-lb

Bolt size
M5 - M10
#10 - 9/16"

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

47BAYPB21P3



Right angle nutrunner nomenclature

47	B	A	X	X	B	XX	XXX	X
Motor 47	Supply B - Batt./PM48				Input Voltage B - 26-48 V		Output Drive Size P3 - 3/8" Sq. dr. spiral geared P4 - 1/2" Sq. dr. spiral geared	Output Drive Locking - Pin locking B - Ball locking
Tool Version A - Right angle			Peripherals S - Barcode scanner - None P - Expansion platform			Max. Torque (Nm) 15 - 15 Nm 48 - 48 Nm 21 - 21 Nm 70 - 70 Nm 28 - 28 Nm 90 - 90 Nm 35 - 35 Nm		
Data Transfer Y - WLAN: Dual band 2.4 GHz, 5 GHz Z - XBee: IEEE 802.15.4 (4 tools per access point)								

Right Angle Model Number	Torque Range		Free Speed (RPM)			Weight-Less Battery		Output Drive Size	Length with 26 V Battery	
	ft-lb	Nm	26 V	44 V	Vmax	lbs.	kg		in.	mm
47BAYPB15P3	4.1 - 11.1	5.5 - 15	485	890	890	4.9	2.20	3/8" SQ	23.0	585
47BAYPB21P3	5.9 - 15.5	8 - 21	370	680	680	4.9	2.20	3/8" SQ	23.0	585
47BAYPB28P3	7.4 - 20.7	10 - 28	260	480	480	4.9	2.20	3/8" SQ	23.0	585
47BAYPB35P3	8.9 - 25.8	12 - 35	255	445	445	5.0	2.25	3/8" SQ	23.1	588
47BAYPB48P3	13.3 - 35.4	18 - 48	180	315	315	5.2	2.34	3/8" SQ	23.6	600
47BAYPB70P4	17.7 - 51.7	24 - 70	123	216	216	9.2	4.18	1/2" SQ	27.2	691
47BAYPB90P4	29.5 - 66.4	40 - 90	80	140	140	9.2	4.18	1/2" SQ	27.2	691

General: All tools must be used with a suitable Cleco/DGD nutrunner controller or PC software solution.
Battery weights: 26 V Li-ion battery 0.50 kg, 44 V Li-ion battery 0.85 kg. The 44 V battery is 19 mm/.750" shorter than the 26 V battery.

Optional accessories: Batteries, battery chargers, scanner, sockets and bits are not included in the standard equipment.

Extra Equipment: Sockets, batteries, and chargers must be ordered separately.

LiveWire 2 Cordless Transducer Control

LiveWire 2 Right Angle Nutrunners

Torque range Bolt size
 5.5 - 65 Nm M5 - M10
 4.1 - 47.9 ft-lb #10 - 9/16"

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

47BAYPB65P4L



Nomenclature for weight-reduced LiveWire 2 right angle nutrunners

47	B	A	Y	P	B	XX	XXX	X	L
Motor 47	Supply B – Batt./PM48			Version B – 26–48 V		Output Drive Size P3 – 3/8" Sq. dr. spiral geared P4 – 1/2" Sq. dr. spiral geared		Tool Series L – LiveWire 2 Series	
Version A – Right angle		Peripherals P – Expansion platform						Output Drive Locking – Pin locking B – Ball locking	
Data Transfer Y – WLAN: Dual band 2.4 GHz, 5 GHz						Max. Torque Nm 15 - 15 Nm 35 - 35 Nm 21 - 21 Nm 48 - 48 Nm 28 - 28 Nm 65 - 65 Nm			

Right Angle Model Number	Torque Range		Free Speed (RPM)			Weight-Less Battery		Output Drive Size	Length with 26 V Battery	
	ft-lb	Nm	26 V	44 V	Vmax	lbs.	kg		in.	mm
47BAYPB15P3L	4.1 - 11.1	5.5 - 15	487	891	891	4.03	1.83	3/8" SQ	22.87	581
47BAYPB21P3L	5.9 - 15.5	8 - 21	370	680	680	4.03	1.83	3/8" SQ	22.87	581
47BAYPB28P3L	7.4 - 20.7	10 - 28	264	482	482	4.03	1.83	3/8" SQ	22.87	581
47BAYPB35P3L	8.9 - 25.8	12 - 35	255	446	446	4.14	1.88	3/8" SQ	22.95	583
47BAYPB48P3L	13.3 - 35.4	18 - 48	181	316	316	4.34	1.97	3/8" SQ	23.46	596
47BAYPB65P4L*	11.1 - 47.9	15 - 65	135	236	236	4.56	2.07	1/2" SQ	23.54	598

General: All tools must be used with an approved Cleco/DGD tightening controller or suitable PC software.
 Battery weights: 26 V Li-Ion 1.1 lbs. (0.50 kg), 44 V Li-Ion 1.9 lbs. (0.85 kg).
 The 44 V battery is 19 mm/.750" shorter than the 26 V battery.

Extra Equipment: Scanner, sockets, batteries, and chargers must be ordered separately.

*Refer to service literature for maintenance schedule

LiveWire Cordless Transducer Control



17BPYSB13Q

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

Pistol Grip Series

Torque range	Bolt size
3.0 - 13 Nm	M5 - M6
2.2 - 9.6 ft-lb	#10 - 1/4"

- 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 B - Batt./PM48				Input Voltage B - 26-48 V		Type of Output Drive Q - Quick-change
Tool Version				Options			Max. Torque (Nm)
P - Pistol grip				S - Barcode Scanner - None P - Expansion Platform			05 - 5 Nm 07 - 7 Nm 09 - 9 Nm 13 - 13 Nm
Data Transfer							
Y - WLAN: Dual band 2.4 GHz, 5 GHz							
Z - XBee: IEEE 802.15.4 (4 tools per access point)							

Pistol Model Number	Torque Range		Free Speed (RPM)			Weight-Less Battery		Output Drive Size	Height with 26 V Battery	
	ft-lb	Nm	26 V	44 V	Vmax	lbs.	kg		in.	mm
17BPYPB05Q	2.2 - 3.7	3 - 5	1639	2428	2428	3.28	1.49	1/4" Hex	8.44	215
17BPYPB07Q	2.2 - 5.2	3 - 7	1161	1721	1721	3.28	1.49	1/4" Hex	8.44	215
17BPYPB09Q	2.2 - 6.6	3 - 9	887	1314	1314	3.28	1.49	1/4" Hex	8.44	215
17BPYPB13Q	2.2 - 9.6	3 - 13	629	931	931	3.28	1.49	1/4" Hex	8.44	215

General: All tools must be used with an approved Cleco/DGD tightening controller or suitable PC software.
Battery weights: 26 V Li-Ion 1.1 lbs. (0.50 kg), 44 V Li-Ion 1.9 lbs. (0.85 kg).
The 44 V battery is 19 mm/.750" shorter than the 26 V battery.

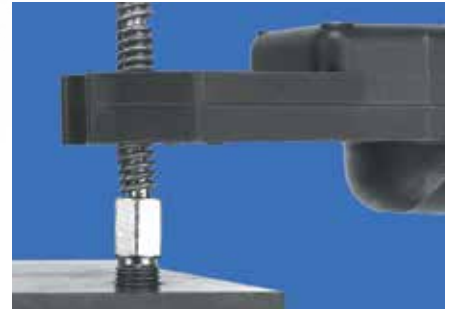
Extra Equipment: Sockets, batteries and chargers must be ordered separately.

LiveWire Cordless Transducer Control

Tube Nut Series

Torque range	Bolt size
10 - 40 Nm	M6 - M8
7.4 - 29.5 ft-lb	1/4" - 7/16"

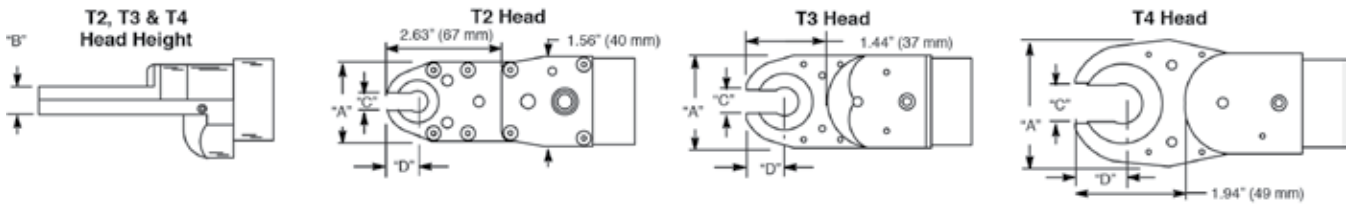
- Brushless precision motor
- High-resolution resolver
- Exact torque measurement by transducer
- Integrated electronic intelligence with power management and I/O signal processing
- Integrated servo



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



Tube nutrunner nomenclature

47	B	T	X	X	X	XX
Motor 47	Supply B - Batt./PM48				Input Voltage B - 26-48 V	
Tool Version T - Tube nut wrench				Options S - Barcode scanner - None		
Data Transfer Y - WLAN: Dual band 2.4 GHz, 5 GHz Z - XBee: IEEE 802.15.4 (4 tools per access point)				Head Size T2 - 20 Nm T3 - 30 Nm T4 - 40 Nm		

Socket identifier

KSX	XX	X	X
Head Size KS2 - T2 KS3 - T3 KS4 - T4			
		Type of Output Drive 0 - Partial thru hex 1 - Thru hex 2 - Double thru hex 3 - Partial double thru hex	
	Extensions 0 - Flush 2 - 1/4" 4 - 1/2" 6 - 3/4"		
	Max. Hex Socket Sizes MG, EE MM, 3/4" MU, 1 1/16" 00, ## (special)	T2 head version T3 head version T4 head version All head versions	

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	



Tube Nut	Torque Range		Free Speed (RPM)			Weight-Less Battery		Max. Drive Size	Length with 26 V Battery		Head									
	ft-lb	Nm	26 V	44 V	Vmax	lbs.	kg		in.	mm	A Width		B Blade Ht.		C Opening		D End/Cntr.			
Model Number											in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
47BTYSB20T2	7.4 - 14.8	10 - 20	260	455	455	5.6	2.54	1/2"	23.6	598	1.42	36	0.55	14	0.28	7	0.53	13		
47BTYSB30T3	11.1 - 22.1	15 - 30	188	329	329	5.6	2.53	3/4"	23.3	588	1.65	42	0.59	15	0.475	12	0.73	19		
47BTYSB40T4	14.8 - 29.5	20 - 40	141	247	247	6.4	2.90	1 1/16"	29.9	612	2.36	60	0.59	15	0.675	17	0.93	24		

General: All tools must be used with an approved Cleco/DGD tightening controller or suitable PC software.

Battery weights: 26 V Li-Ion 1.1 lbs. (0.50 kg), 44 V Li-Ion 1.9 lbs (0.85 kg)
The 44 V battery is 19 mm/.750" shorter than the 26 V battery.

Extra Equipment: Batteries and chargers must be ordered separately.

To order individual sockets, use a "KS" prefix.
(i.e. KS2EA01 for a T2, 1/4", flush, thru hex socket.)

LiveWire Cordless Transducer Control

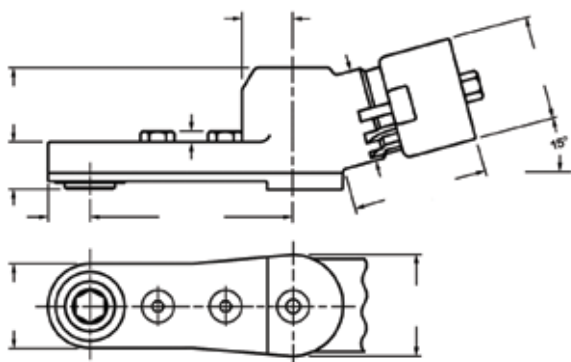
Crowfoot Series

Torque range Bolt size
 10.5 - 30 Nm M6 - M8
 7.7 - 22.1 ft-lb 1/4" - 7/16"

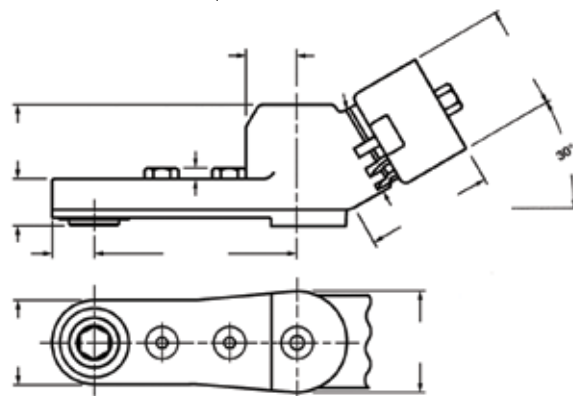
- Brushless precision motor
- High-resolution resolver
- Exact torque measurement by transducer
- Integrated electronic intelligence with power management and I/O signal processing
- Integrated servo



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				Input Voltage B - 26-48 V	Head Version C1 - 15° C3 - 30°
Tool Version C - Crowfoot nutrunner				Options S - Barcode scanner - None		
Data Transfer Y - WLAN: Dual band 2.4 GHz, 5 GHz Z - XBee: IEEE 802.15.4 (4 tools per access point)						

Socket identifier

CS	XX	X	X
Head CS - Crowfoot			
		Type of Output Drive 1 - Thru 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 Model Number	Torque Range		Free Speed (RPM)			Weight-Less Battery		Max. Drive Size	Length with 26 V Battery	
	ft-lb	Nm	26 V	44 V	Vmax	lbs.	kg		in.	mm
47BCYSB30C1	7.7 - 22.1	10.5 - 30	186	326	326	6.12	2.78	15 mm	26.3	667
47BCYSB30C3	7.7 - 22.1	10.5 - 30	186	326	326	6.12	2.78	15 mm	26	660

General: All tools must be used with an approved Cleco/DGD tightening controller or suitable PC software.
 Battery weights: 26 V Li-Ion 1.1 lbs (0.50 kg), 44 V Li-Ion 1.9 lbs (0.85 kg).
 The 44 V battery is 19 mm/.750" shorter than the 26 V battery.

Extra Equipment: Batteries and chargers must be ordered separately. See back page for optional accessories.

To order individual sockets, use a "CS" prefix before the required socket. (i.e. CSEE01 for a 1/2", flush, thru hex socket.)

Batteries, Chargers & Power Modules

44 V Li-Ion Battery Technology

- Up to 83% faster vs. 26 V battery
- Up to 1700 rundowns per charge (hard joint)
- Life > 800 charging cycles
- On-board intelligence
- LCD Display
 - Indicates battery charge level
 - Shows total number of charge cycles
- Single tab, one-hand removal



5 bar on-battery display for advanced feedback

Charge Cycles – Unplugged display

Display	Charge Cycles
■ □ □ □ □	0 – 199
□ ■ □ □ □	200 – 399
□ □ ■ □ □	400 – 599
□ □ □ ■ □	600 – 799
□ □ □ □ ■	> 800

Operational display

Display	Charge Level
□ □ □ □ □	Deep Sleep Mode or Defective
■ □ □ □ □	< 20%
■ ■ □ □ □	20 – 40%
■ ■ ■ □ □	40 – 60%
■ ■ ■ ■ □	60 – 80%
■ ■ ■ ■ ■	80 – 100%

The cells and electronic balancing circuit are fixed to an internal cell holder to provide maximum durability.



26 V/44 V Charger Technology

- Auto-sensing 26 V/44 V charger technology
- One hour charge cycle
- Auto-sensing input (85 - 275 VAC)
- Power/Status LEDs



① LED Charger	Graphic	Status	② LED Battery	Graphic	Status
○		Off	○		Off – No battery contact
Lights up G		Power supply connected	Lights up G		Battery is charged
Flash 2 Hz O		Error charger,	Flash 0.5 Hz G		Battery charging, charge state > 80%
Lights up R		Defect,	Flash 1 Hz G		Battery charging, charge state < 80%
			Flash 2 Hz O		– Only 44 V –
			Lights up R		Defekt battery,

LiveWire Power Module PM 48

- Provides a constant power source with speeds matching that of the 44 V battery
- Auto sensing input - (85 - 275 VAC)
- Power and status LEDs
- Electronic circuit protection



Cordless Accessories

Protective Tool Covers



Order No.	Description
937704PT	Protective covers for right angle tool 47BA..15-28 Nm, P3+P3L Also suitable for LiveWire 2 tools
937706PT	Protective covers for right angle tool 47BA..35 Nm, P3 +P3L Also suitable for LiveWire 2 tools
937708PT	Protective covers for right angle tool 47BA..48 Nm, P3 +P3L Also suitable for LiveWire 2 tools
937711PT	Protective covers for right angle tool 47BA..70 Nm/90 Nm P4
936424PT	Protective covers for scanner on 47BA tools Not suitable for LiveWire 2 tools
937210PT	Protective covers for display on 47BA tools Not suitable for LiveWire 2 tools
936489PT	Protective covers for LiveWire pistol grip tools 17BP.. - black
942182PT	Protective covers for LiveWire pistol grip tools 17BP.. - green

Barcode Scanner for Platform & LiveWire 2 Tools



Order No.	Description
937240PT	Barcode scanner Class 2 for LiveWire 2 and Platform tools

(If you need a class 1 scanner please order number 961621PT)

Gyroscope for Platform & LiveWire 2 Tools



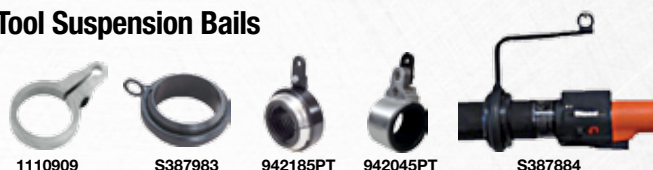
Order No.	Description
942039PT	Gyroscope module for LiveWire 2 and Platform tools

Tool Holders



Order No.	Description
935144	Tool holder for pistol grip tools incl. IrDA
935396	Tool holder for pistol grip tools
935290	Tool holder for right angle tools up to 50 Nm incl. IrDA
935395	Tool holder for right angle tools up to 50 Nm
935170	Infrared interface with cable
935998	Tool holder for right angle tools from 70 Nm
935999	Tool holder for right angle tools from 70 Nm incl. IrDA

Tool Suspension Bails



Order No.	Description
1110909	Standard tool suspension bail (not for LiveWire 2 L Series)
S387983	Rotating suspension bail for right angle nutrunner (not for LiveWire 2 L Series)
S387884	Rotating suspension bail with bracket for right angle nutrunner (not for LiveWire 2 L Series)
942045PT	Standard tool suspension bail for LiveWire 2 L
942185PT	Rotating suspension bail for LiveWire 2 L Series
301837	Additional handle for Pistol Grip Tools
942040PT	Reaction bar for LiveWire 2 L Series

Batteries



Order No.	Description	Column Capacity	Weight kg
935377	26 V Li-ion	1.6 Ah	0.50
936400PT	44 V Li-ion	1.65 Ah	0.85

Battery Chargers



Order No.	Description
935391	26 V battery charger
935382	26 V battery charger (UK)
936491PT	26 V/44 V battery charger
935302	26 V 4 unit charging station (230 VAC only)

Vmax PM48/PM48-LAN Power Module



Order No.	Weight		Width		Length		Depth	
	lbs.	kg	in.	mm	in.	mm	in.	mm
961350PT	6.8	3.1	9.4	240	4.7	120	5.9	150
941466PT	8.1	4.0	0.4	10	13.4	340	5.9	150

2 m power cable incl.

Vmax Cables



Order No.	Description
961341-***	Fixed connector
961369-060	Right angle swivel connector
961342-***	Extension cable

***Length: 030=3 m, 060=6 m, 080=8 m, 100=10 m

Maximum 20 m total length

The Right Fit

LiveWire Mini-Spindles combine the flexibility of wired or wireless connectivity with the modularity of a fixtured spindle application

- Designed for unique applications with space limitations
- Eliminates the need for complex fixtures and extensive festooning of cables typically associated with fixtured spindle applications
- Available in right-angle and in-line configurations
- Available with fixed or floating spindle
- Recommended application torques are 3 to 35 Nm



For inquiries on Mini-Spindles, including project design, deployment, and installation, contact your Regional Application Center. Locations can be found at: <http://www.ApexPowerTools.com>

Sunroof Assembly Application



LiveWire I-Wrench

Precision Tightening

Our Cleco LiveWire I-Wrench is a truly universal production tool for meeting your flexible manufacturing needs. It is the perfect tool for fastening operations on your components. It is also suitable for your production line, as it enables you to use various fastening strategies with torque/angle. The patented angle measurement system, the color touchscreen and the high memory capacity of 1 GB make the Cleco LiveWire I-Wrench the most flexible and versatile torque/angle wrench on the market.



FEATURES

- Attachment quick-disconnect
- Robust, one-piece torque beam design
- Large, bright, easy-to-read touchscreen LCD display
*with optional hard screen protector
- Optional Barcode Scanner
- LED operator feedback. Provides a visual indication of target torque
- Large, easy-touch navigation panel buttons
- Machined aluminum durable and ergonomic handle

ACCURACY

- $\pm 0.5\%$ display error at 20% - 100% nominal torque
- $\pm 1\%$ display error at 10% - 20% nominal torque
- $\pm 0.5^\circ$ display error on the angle
- Angle resolution 0.1°

NAVIGATION

- Torque & angle data
- Graphs on the controller

Models and Accessories

I-WRENCH TORQUE & ANGLE WRENCH

with Rubber Protection, with WLAN Module, with Tool Head Recognition



Model Name	Order No. (without barcode scanner)	Order No. (with barcode scanner)	Torque Range		Output Drive	Length		Weight	
			ft-lb	Nm	mm	in.	mm	lbs	kg
I-Wrench 15	PRW-0015-0110-WI	PRW-0015-1110-WI	1.1 - 11	1.5 - 15	9x12	15.47	393	1.76	0.80
I-Wrench 30	PRW-0030-0110-WI	PRW-0030-1110-WI	2.2 - 22	3 - 30	9x12	15.47	393	1.90	0.86
I-Wrench 70	PRW-0070-0110-WI	PRW-0070-1110-WI	5.2 - 52	7 - 70	9x12	19.61	498	2.05	0.93
I-Wrench 100	PRW-0100-0110-WI	PRW-0100-1110-WI	7.4 - 74	10 - 100	9x12	19.61	498	2.05	0.93
I-Wrench 200	PRW-0200-0110-WI	PRW-0200-1110-WI	14.8 - 148	20 - 200	14x18	24.76	629	3.31	1.50
I-Wrench 300	PRW-0300-0110-WI	PRW-0300-1110-WI	22.2 - 222	30 - 300	14x18	30.67	779	4.10	1.86
I-Wrench 400	PRW-0400-0110-WI	PRW-0400-1110-WI	29.6 - 296	40 - 400	14x18	34.61	879	4.41	2.00
I-Wrench 600	PRW-0600-0110-WI	PRW-0600-1110-WI	44.4 - 444	60 - 600	14x18	41.61	1057	8.05	3.65
I-Wrench 800*	PRW-0800-0110-WI	PRW-0800-1110-WI	59.2 - 592	80 - 800	Ø 20	52.36	1330	11.24	5.10
I-Wrench 1000*	PRW-1000-0110-WI	PRW-1000-1110-WI	74.0 - 740	100 - 1000	Ø 20	63.39	1610	13.78	6.25
I-Wrench 1200*	PRW-1200-0110-WI	PRW-1200-1110-WI	88.5 - 885	120 - 1200	Ø 28	67.52	1715	15.43	7.00

*does not include Tool Recognition Capabilities

I-WRENCH ACCESSORIES

Model number	Model name	Description
313110030	I-Wrench-DRP	Rubber protection with display protection
197140013	I-Wrench-PU	Head recognition programming unit
197130020	TAW-PSS3-RP 15/30	Tool charging cradle for Cleco LiveWire I-Wrench 15/30 Nm with rubber protection
197130021	TAW-PSS3-RP 70/100	Tool charging cradle for Cleco LiveWire I-Wrench 70/100 Nm with rubber protection
197130022	TAW-PSS3-RP 200	Tool charging cradle for Cleco LiveWire I-Wrench 200 Nm with rubber protection
197130023	TAW-PSS3-RP 300	Tool charging cradle for Cleco LiveWire I-Wrench 300 Nm with rubber protection
197130024	TAW-PSS3-RP 400	Tool charging cradle for Cleco LiveWire I-Wrench 400 Nm with rubber protection
197130025	TAW-PSS3-RP 600	Tool charging cradle for Cleco LiveWire I-Wrench 600 Nm with rubber protection
197130026	TAW-PSS3-RP 800	Tool charging cradle for Cleco LiveWire I-Wrench 800 Nm with rubber protection
197130027	TAW-PSS3-RP 1,000	Tool charging cradle for Cleco LiveWire I-Wrench 1,000 Nm with rubber protection
197130028	TAW-PSS3-RP 1,200	Tool charging cradle for Cleco LiveWire I-Wrench 1,200 Nm with rubber protection
313210042	I-Wrench-BA	Li-Ion Battery 3.7 V
197140025	I-Wrench-EC1	External battery charger for 1 battery with J21
197990008	I-Wrench-USB	USB cable 2 m
544249PT	Access Point	WLAN Dual Band Access Point 2.4 & 5 GHz (US) incl. Antennas
961506PT	Access Point	WLAN Dual Band Access Point 2.4 & 5 GHz (EU) incl. Antennas
333110016	Chip/Tag for Head	Chip/Tag for Head Recognition

More accessories are available upon request. Please contact our Sales & Service centers.



PRW charging cradle



Rubber protective cover



Li-ion battery 3.7 V



USB cable 2 m



Programming unit



External charger
1 battery

Interchangeable Heads

RATCHET HEADS

without Tool Recognition Capability (machined ready for tool recognition chip)			with Tool Recognition Capability		Torque Capacity (Nm)
Model number	Description	Torque Capacity (Nm)	Model number	Description	
197170001	9x12 - 1/4"	40	197179001	TR 9x12 - 1/4"	40
197170002	9x12 - 3/8"	100	197179002	TR 9x12 - 3/8"	100
197170003	9x12 - 1/2"	100	197179003	TR 9x12 - 1/2"	100
197170005	14x18 - 1/2"	300	197179005	TR 14x18 - 1/2"	300
197170004	14x18 - 3/4"	650	197179004	TR 14x18 - 3/4"	650
197170007	Ø 20 - 3/4"	1050			
197170008	Ø 28 - 1"	1300			
197170146	Blank End Insert Tool 9x12				
197120147	Blank End Insert Tool 14x18				



OPEN END HEADS

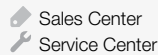
Product No. (without Tool Recognition Capability)	Product No. (with Tool Recognition Capability)	Product Description	Torque Capacity (Nm)
197170024	197179024	7 mm 9x12	200
197170025	197179025	8 mm 9x12	200
197170026	197179026	9 mm 9x12	200
197170027	197179027	10 mm 9x12	200
197170028	197179028	11 mm 9x12	200
197170029	197179029	12 mm 9x12	200
197170030	197179030	13 mm 9x12	200
197170031	197179031	14 mm 9x12	250
197170032	197179032	15 mm 9x12	250
197170033	197179033	16 mm 9x12	250
197170034	197179034	17 mm 9x12	250
197170035	197179035	18 mm 9x12	250
197170036	197179036	19 mm 9x12	250
197170037	197179037	13 mm 14x18	350
197170038	197179038	14 mm 14x18	350
197170039	197179039	15 mm 14x18	350
197170040	197179040	16 mm 14x18	350
197170041	197179041	17 mm 14x18	350
197170042	197179042	18 mm 14x18	350
197170043	197179043	19 mm 14x18	350
197170044	197179044	21 mm 14x18	350
197170045	197179045	22 mm 14x18	350
197170046	197179046	24 mm 14x18	350
197170047	197179047	25 mm 14x18	350
197170048	197179048	27 mm 14x18	350
197170049	197179049	30 mm 14x18	350
197170050	197179050	32 mm 14x18	350

More accessories are available upon request. Please contact our Sales & Service centers.

Please note: Ratchets are not included and need to be ordered separately. Neither are sockets which you can order from our Apex Bits & Sockets assortment

POWER TOOLS SALES & SERVICE CENTERS

Please note that all locations may not service all products.
Contact the nearest Apex Tool Group Sales & Service Center for the appropriate facility to handle your service requirements.



NORTH AMERICA | SOUTH AMERICA

Detroit, Michigan

Apex Tool Group
2630 Superior Court
Auburn Hills, MI 48236
Phone: +1 (248) 393-5640
Fax: +1 (248) 391-6295

Lexington, South Carolina

Apex Tool Group
670 Industrial Drive
Lexington, SC 29072
Phone: +1 (800) 845-5629
Phone: +1 (919) 387-0099
Fax: +1 (803) 358-7681

Louisville, Kentucky

Apex Tool Group
1000 Glengarry Drive
Suite 150
Fairdale, KY 40118
Phone: +1 (502) 708-3400
apexpowertools.com/service

Canada

Apex Tool Canada, Ltd.
7631 Bath Road
Mississauga, Ontario L4T 3T1
Canada
Phone: (866) 691-6212
Fax: (905) 673-4400

Mexico

Apex Tool Group
Manufacturing México
S. de R.L. de C.V.
Vialidad El Pueblito #103
Parque Industrial Querétaro
Querétaro, QRO 76220
Mexico
Phone: +52 (442) 211 3800
Fax: +52 (800) 685 5560

Brazil

Apex Tool Group
Ind. Com. Ferram, Ltda.
Av. Liberdade, 4055
Zona Industrial Iporanga
Sorocaba, São Paulo
CEP# 18087-170
Brazil
Phone: +55 15 3238 3820
Fax: +55 15 3238 3938

EUROPE | MIDDLE EAST | AFRICA

England

Apex Tool Group
GmbH & Co. OHG
C/O Spline Gauges
Piccadilly, Tamworth
Staffordshire B78 2ER
United Kingdom
Phone: +44 1827 8727 71
Fax: +44 1827 8741 28

France

Apex Tool Group S.A.S.
25 rue Maurice Chevalier
B.P. 28
77831 Ozoir-La-Ferrière
Cedex, France
Phone: +33 1 64 43 22 00
Fax: +33 1 64 43 17 17

Germany

Apex Tool Group
GmbH & Co. OHG
Industriestraße 1
73463 Westhausen
Germany
Phone: +49 (0) 73 63 81 0
Fax: +49 (0) 73 63 81 222

Hungary

Apex Tool Group
Hungária Kft.
Platánfa u.2
9027 Győr
Hungary
Phone: +36 96 66 1383
Fax: +36 96 66 1135

ASIA PACIFIC

Australia

Apex Tool Group
519 Nurigong Street, Albury
NSW 2640
Australia
Phone: +61 2 6058 0300

China

Apex Power Tool Trading
(Shanghai) Co., Ltd
2nd Floor, Area C
177 Bi Bo Road
Pu Dong New Area, Shanghai
China 201203 P.R.C.
Phone: +86 21 60880320
Fax: +86 21 60880298

India

Apex Power Tools India
Private Limited
Gala No. 1, Plot No. 5
S. No. 234, 235 & 245
Indialand Global
Industrial Park
Taluka-Mulsi, Phase I
Hinjawadi, Pune 411057
Maharashtra, India
Phone: +91 020 66761111

Japan

Apex Tool Group Japan
Korin-Kaikan 5F,
3-6-23 Shibakoen, Minato-Ku,
Tokyo 105-0011, JAPAN
Phone: +81-3-6450-1840
Fax: +81-3-6450-1841

Korea

Apex Tool Group Korea
#1503, Hibrand Living Bldg.,
215 Yangjae-dong,
Seocho-gu, Seoul 137-924,
Korea
Phone: +82-2-2155-0250
Fax: +82-2-2155-0252

Cleco®

LiveWire™

Apex Tool Group, LLC
Phone: +1 (800) 845-5629
Phone: +1 (919) 387-0099
Fax: +1 (803) 358-7681
www.ClecoTools.com