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QX Series Angle Wrench

**REAL TOOLS FOR REAL WORK.** 

## **Next-Generation Productivity.**

The innovative QX Series is a revolutionary step for your entire facility, one that shows how a smarter tool can improve process control, operator comfort and data communication in a single package, while increasing productivity, lowering costs and ensuring a high-quality product at the end of your line—all at a price you can afford today.

Tools that put you in total control are the future of assembly. That future is here, that future is REAL.

### NOT JUST TORQUE CONTROL, BUT TOTAL CONTROL.

#### Accuracy:

• Ingersoll Rand's patented closed-loop transducer control at the heart of the tool delivers precise torque and accurate, traceable results—it's precision where you need it most

#### **Control**:

- · A multi-function display module allows for quick setup and feedback on every QX Series tool
- Eight user-programmable configurations per tool for torque, angle and speed make it one tool that does the work of eight, reducing costs and workspace clutter

#### **Comfort:**

- · Compact, lightweight and ergonomically balanced so the operator can work without restraints
- · Cordless and compact, the QX Series is designed for safe and clean operation

#### **Communication:**

- A wireless communication option facilitated by Ingersoll Rand's dedicated Process Communication Module (PCM) helps integrate the tool and the assembly line into a true plant-wide network
- Manage data, process control and the ability to adjust tool configurations in real time using Ethernet, Fieldbus or I/O





# A Technological Vision.

Ingersoll Rand's design team started with a bold idea—to engineer a new class of advanced cordless fastening tools that could deliver closed-loop, multi-configuration control and precision at an affordable price. This idea has become a reality with the QX Series.

The QX Series Precision Screwdriver and Angle Wrench are designed with innovative technological features that set them apart from all other tools in their categories.

### The Building Blocks of Ingenious Engineering.

#### **Control**:

Multi-Function Display Module



- User-friendly display shows results and accepts programming inputs
- Up to eight user-programmable fastening configurations
- Stores cycle data for up to 1,200 rundowns

Precision: Patented Closed-Loop Transducer

- Accurately senses torque to manage the fastening cycle
- Ultimate process control
- Advanced strategies like angle control, prevailing torque and torque monitoring

#### **Power Management:** Digital Signal Processor



- Accurately controls motor for precision fastening
- Monitors torque, angle and motor current while communicating end-ofrun data
- Eliminates the need for costly external controller

#### **Efficiency**:

Advanced Power Board



- Controls DC motor to drive tools through userprogrammed torque, angle and speed profiles
- Modulates power from lithiumion battery to optimize performance

**Communication:** Intelligent Radio Board



- An optional feature that transmits end-of-run data wirelessly to the Process Communication Module (PCM)
- PCM transmits data to database or assembly line control system via Ethernet, Fieldbus or I/O

### DC Brushless I

DC Brushless Motor



- Drives QX Series precision power train
- No brushes to wear out or leave carbon residue
- Efficient rare earth magnet motor designed for more than a million cycles





## **Engineering The Future.**

Patented transducer control provides traceable results

**USB port** for convenient programming and data transfer

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Precision planetary gears for greater reliability

Multiple drive choices 1/4" quick-change, 1/4" square drive or 3/8" square drive

**Super bright LED headlight** with programmable on and off times. (Not available on the QX Series Angle Wrench)

Non-contacting trigger and reverse switch for maximum durability (patent-pending)

> Ergonomic design comfortable, lightweight and balanced

Durable DC brushless motor tested beyond a million cycles

> **Optional wireless communications** for process control with I/O and data collections

High strength, impact resistant lens guards against damage



**Backlit display** offers quick set-up and remarkable visual feedback

> Two 20V battery options provide maximum runtime and portability



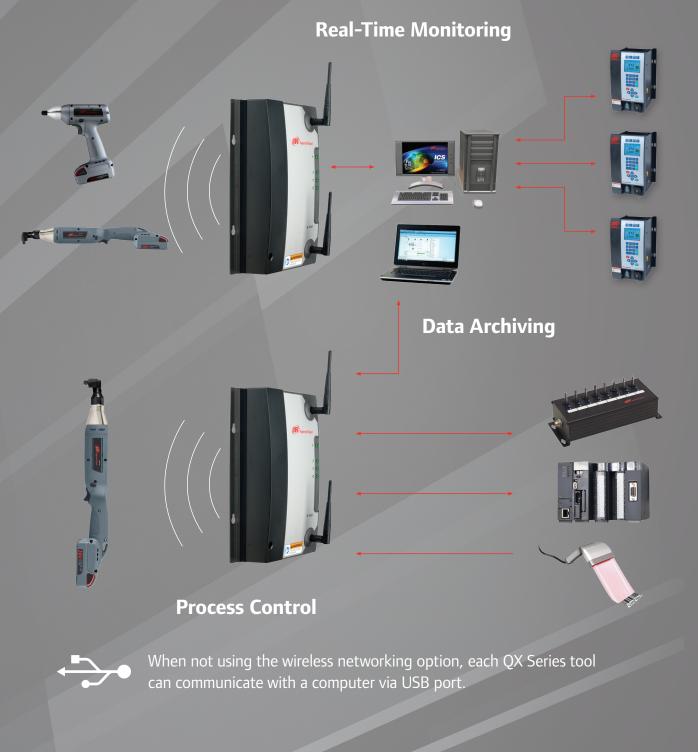


## A Plant-Wide Network for Plant-Wide Productivity.

Ingersoll Rand doesn't just give you unprecedented technology; we want to give you total control of that technology. Our Process Communication Module allows for control that translates into maximum productivity and efficiency.

#### 10 to 1:

Every Process Communication Module can communicate with up to 10 individual QX Series tools.



www.irtools.com/QX (IR) Ingersoll Rand.

# **Configured For Versatility.**

The QX Series can be tailored to meet the needs of your lines.

#### **QX Series Specifications**

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Model	CPN	Nm	rpm	kg*		↑ ₩₩₩ mm	in	Communication	
OX Series Cordle	OX Series Cordless Precision Screwdriver								
OXX2PT04PO4	47104062	(0.8–4)	1,500	0.91	215.4	20.3-26.0	1/4"	Wireless Enabled	
OXX2PT04PS4	47104070	(0.8–4)	1,500	0.91	208.3	20.3-26.0	1/4"	Wireless Enabled	
OXX2PT04PS6	47104088	(0.8–4)	1,500	0.91	212.0	20.3-26.0	3/8"	Wireless Enabled	
OXX2PT08PQ4	47104005	(1.6–8)	1,150	0.91	215.4	20.3-26.0	1/4"	O Wireless Enabled	
OXX2PT08PS4	47104013	(1.6–8)	1,150	0.91	208.3	20.3-26.0	1/4"	Wireless Enabled	
OXX2PT08PS6	47104021	(1.6-8)	1,150	0.91	212.0	20.3-26.0	3/8"	Wireless Enabled	
0XX2PT12P04	47103940	(2.4–12)	750	0.91	215.4	20.3-26.0	1/4"	Wireless Enabled	
QXX2PT12PS4	47103957	(2.4–12)	750	0.91	208.3	20.3-26.0	1/4"	☐ Wireless Enabled	
OXX2PT12PS6	47103965	(2.4–12)	750	0.91	212.0	20.3-26.0	3/8"	☐ Wireless Enabled	
OXC2PT04P04	47104039	(0.8–4)	1,500	0.91	215.4	20.3-26.0	1/4"	Via USB Cable	
OXC2PT04PS4	47104047	(0.8–4)	1,500	0.91	208.3	20.3-26.0	1/4"	Via USB Cable	
QXC2PT04PS6	47104054	(0.8–4)	1,500	0.91	212.0	20.3-26.0	3/8"	Via USB Cable	
QXC2PT08PQ4	47103973	(1.6-8)	1,150	0.91	215.4	20.3-26.0	1/4"	Via USB Cable	
QXC2PT08PS4	47103981	(1.6-8)	1,150	0.91	208.3	20.3-26.0	1/4"	Via USB Cable	
QXC2PT08PS6	47103999	(1.6-8)	1,150	0.91	212.0	20.3-26.0	3/8"	Via USB Cable	
QXC2PT12PQ4	47103916	(2.4–12)	750	0.91	215.4	20.3-26.0	1/4"	Via USB Cable	
QXC2PT12PS4	47103924	(2.4–12)	750	0.91	208.3	20.3-26.0	1/4"	Via USB Cable	
QXC2PT12PS6	47103932	(2.4–12)	750	0.91	212.0	20.3-26.0	3/8"	Via USB Cable	
QX Series Cordless Angle Wrench									
QXX2AT05PQ4	47510887005	(1.0–5)	1,213	(1.14)	552	9.2	1/4"	O Wireless Enabled	
QXX2AT10PS6	47510887004	(2.0–10)	936	(1.18)	525	12.5	3/8"	Wireless Enabled	
QXX2AT15PS6	47510887003	(3.0–15)	600	(1.18)	525	12.5	3/8"	Wireless Enabled	
QXX2AT18PQ4	47510887002	(3.6–18)	500	(1.27)	542	13	1/4"	O Wireless Enabled	
QXC2AT05PQ4	47510887010	(1.0-5)	1,213	(1.14)	552	9.2	1/4"	O Via USB Cable	
QXC2AT10PS6	47510887009	(2.0–10)	936	(1.18)	525	12.5	3/8"	Via USB Cable	
QXC2AT15PS6	47510887008	(3.0–15)	600	(1.18)	525	12.5	3/8"	Via USB Cable	
QXC2AT18PQ4	47510887007	(3.6–18)	500	(1.27)	542	13	1/4"	O Via USB Cable	

\*Weight and length do not include battery. Battery sold separately.

Specifications are subject to change.

#### **QX Series Process Communication Module (PCM)**

		IC-PCM-2-EU		
Main Power Supply	84737-A499-PCM-5V (supplied) 100-240 V AC input - 5V DC output	•	•	
Tool Connections	Wireless tool connections	1	Up to 10	
Software	ICS Connect software	•	•	
Communication	Ethernet to ICS	•	•	
Fieldbus Options	Ethernet/IP, DeviceNet, Interbus-S, Profibus, Modbus-TCP	•		
Protocols	Open Protocol, Ethernet EOR, Serial EOR, Profinet-Communication	•		
Printers/Devices	Serial RS232, bar code, label printing	•		
1/0	8 inputs/8 outputs, with behavior assignable through ICS software, operates at 24V DC	•		
I/O Power Supply	Power Supply 84737-A499-PCM-24V (supplied) 100-240 V AC input - 24V DC output		•	
Indicators	Power ON, System Ready, Wireless Activity, Ethernet Activity	•	•	



**Process Communication Module** IC-PCM-2-EU CPN 24119638

#### **Batteries**

All QX Series tools are compatible with both the BL2010 and BL2005 batteries. The BL2010 is optimum for longer use applications, while the BL2005 is ideal for tighter spaces and reduced weight.





Ingersoll Rand (NYSE:IR) advances the quality of life by creating comfortable, sustainable and efficient environments. Our people and our family of brands—including Club Car<sup>®</sup>, Ingersoll Rand<sup>®</sup>, Thermo King<sup>®</sup> and Trane<sup>®</sup>—work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; and increase industrial productivity and efficiency. We are a \$12 billion global business committed to a world of sustainable progress and enduring results.

