



## Efficient Assembly Solutions for Solar Power Plants



CONNECT SERIES™ gives you the flexibility to control and program different torque tool. The INSIGHTConnect mobile application lets you log and monitor all your moments are 100% fulfilled – as you cut the time it takes to do the job.

- More precision
- More quality
- More traceability

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tightening



18-21 Nm bolt tightening

**OX CONNECT SERIES™**  
Cordless Angle Tools with  
Customized Crowfoot  
Programming strategy



**OX CONNECT SERIES™**  
Cordless Pistol Tools



18 Nm bolt tightening



## Sun Tracker Units Assembly

**OXM Cordless  
Torque Multiplier**

Sun Tracker Units rotate the structure towards the Sun in order to optimize the efficiency of PV cells. Generally the fastening requirements here are high torques due to the mechanics of these high-precision structures,



150Nm – 500 Nm bolt tightening

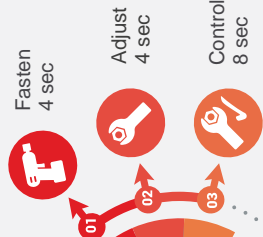


simple tools costs you time and money. What's more, an average 20% of bolts are overtightened, risking deformation of panels, structures and bolts... and even higher costs.

### Ingersoll Rand QX Connect Precision Tools Solution

# x5.3

times faster tightening



With torque control



Our solution:

QX precision tools with their torque control system and transducer are accurate to around 3% every single time. That means more quality and lower costs due to overtorque deformations, penalties and customer complaints.

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big problems in solar assembly from metallic structure deformation and failure to adding to reduced efficiency.

are they meet quality standards in three steps:

- thout torque control
- al torque meter
- prque meter

of bolts in the average array – and arrays free-stage, labour-intensive process means and increased cost.



## INSIGHT™ CONNECT APP

The Insight Connect app is the easy way to boost quality assurance as you cut project delays and reduce the risk of penalties caused by quality issues.



Our FREE, user-friendly app is all you need to set up, train, audit and program every QX tool.



- Download the FREE app.
- Set your targets and go!

Available in Android & IOS



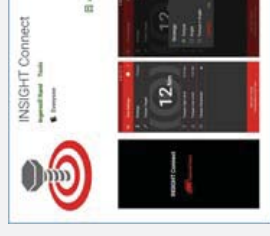
to tighten and go. Set the tool using our mobile

Ingersoll Rand Precision Tools

with torque control

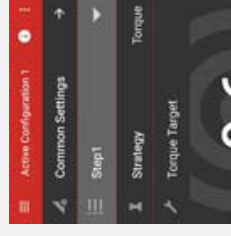
Increase quality four simple steps

- Download the FREE app.



Available in Android & IOS

- Set your targets and go!





**-94%**

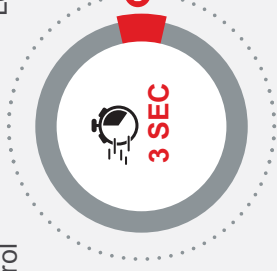
Less workload

**with**

torque control



Fasten



Fasten

### Compact PV cell tightening

Compact PV cells mean it can be hard to access bolts with standard assembly tools. Manual adjustment is time-consuming and fiddly, and can cause expensive damage.

Metallic structures are getting tighter and tighter – and traditional tools often have problems accessing joints.

That makes it tough to tighten bolts to the right torque levels, which means lost productivity and even structural deformations, which can cause big problems in the field.

addresses this – a metallic part helps you access even built torque system



The QX Connect Series™ gives you total, closed-loop control of the fastening process. This connectivity options means you can use it wherever there's a job to be done.

- **Flexibility** Use the same tool for multiple torque targets, and choose the right level of acceleration, free speed and shutdown speed to match the tool to any job.
- **Feedback** with visual and audio alerts when you need them
- **Accurate** Set torque accurate to around 3% (depending on application, tested to ISO 5393 standards)
- **Quality monitoring** Send data to a mobile app for easy access
- **Maintenance alarms** program the tool to alert you when it needs service
- **Indicators** for maintenance, such as low battery or low torque



### SUGGESTED PRODUCTS

#### QX CONNECT SERIES™ Cordless Pistol Tools

#### QX CONNECT™ Cordless Air Tools

	QXFN	QXFD	QXFN	QXFN
Max Torque (Nm)	18Nm	18Nm	80Nm	80Nm
Certified Accuracy / Torque Control with Transducer	✓	✓	✓	✓
Monitoring, Data Logging	✓	✓	✓	✓
Setup with Mobile Application	✓	✓	✓	✓
Display / Keypad	–	●	–	–
Ergonomic Tightening System	Optional	Optional	Optional	Optional
Applications	PV Cells assembly, Tracker Module (18-21Nm)		Main body & Tracker Module (40-80 Nm)	
Speed range (rpm)	Min: 500 rpm Max: 1500 rpm		Min: 375 rpm Max: 1200 rpm	

ASK FOR A FREE FIELD TEST



Ingersoll Rand (NYSE:IR), driven by an entrepreneurial spirit and ownership mindset, is dedicated to helping make life better for our employees, customers and communities. Customers lean on us for our technology-driven excellence in mission-critical flow creation and industrial solutions across 40+ respected brands where our products and services excel in the most complex and harsh conditions. Our employees develop customers for life through their daily commitment to expertise, productivity and efficiency.