

### Production Delays Solved

Lighting Manufacturer, USA

This case study discusses the successful installation of an Ingersoll Rand QX Series cordless precision screwdriver to solve an issue on a lighting fixture manufacturer's production line. Ingersoll Rand offers innovative, reliable solutions to help customers increase their efficiency and process intelligence.

### Customer Overview

Our customer is a leader in the lighting industry and manufactures lighting fixtures for major sporting arenas around the world.

### The Challenge

This light fixture manufacturer had to switch between different bit sizes and fastening configurations on its assembly tools frequently, and the constant changes slowed production rates. The assembly tools required battery changes multiple times per shift, adding to the slow production rates. The customer needed a reliable solution to help the factory maximize its production capacity.

### The Ingersoll Rand Solution

The initial analysis determined the root cause to be a continuous time delay between every configuration change, specifically when incorrect configurations were applied and redone.

To resolve the issue, Ingersoll Rand helped the customer install an eight-position bit tray to use in conjunction with the QX Series Cordless Precision Screwdriver and Process Control Module (PCM) box. The QX Series tool is a transducer controlled tool. When coupled with the PCM box and bit box, it creates a wireless communication system that allows the bit box to automatically change the configuration of the QX Series tool every time a different bit is selected.



The QX Series Cordless Precision Screwdriver is also 30% lighter than the previous assembly tools, which helped reduce operator fatigue. The QX Series tool is powered by a high power 20V lithium-ion battery which lasts more than one shift on a single charge.

### Result

Using the QX Series control system, the manufacturer achieved process control, automated torque control and precision accuracy. As a result, production rates increased. Since the customer runs a significant number of screws on each product, the extended battery run time on the QX Series tool helped the customer reach through-put goals and maximize the plant's production capacity. The QX Series Cordless Precision Screwdriver is also 30% lighter than the previous assembly tools, which helps reduce operator fatigue.

Ingersoll Rand has worked with many of the world's leading manufacturers for more than 140 years and understands the interface between the tool and operator. Ingersoll Rand applies this experience to