DC ELECTRIC FASTENING SYSTEMS
Different, by Design

TAKE TOTAL CONTROL

Taking total control of your fastening process doesn't have to be complicated. Our comprehensive family of DC electric fastening systems deliver simple, flexible and capable solutions for all of your assembly requirements. No matter the industry or application, you can count on Ingersoll Rand® as a trusted partner to help you get the job done right.

DIFFERENT, BY DESIGN

SIMPLE

◄ Expertise not required

- Save on selection, training and installation costs
- Easy-to-use, ergonomic designs
- Simple to order, fast delivery

CAPABLE

FLEXIBLE

▲ Meet your requirements

- Performance that optimizes your productivity
- Durable designs lower cost of ownership
- Advanced diagnostics identify problems and enhance safety

▲ Easily implement change

- Easy line integration and rebalancing
- Multiple product options
- Custom solutions available

INSIGHTqc™ CONTROLLER

When trying to achieve simple manufacturing goals in a complex manufacturing world, understanding the fastening process doesn't have to be complicated. The new Ingersoll Rand® INSIGHTqc™ is different, by design. This controller is designed to be easy to use and integrate, while providing a common platform to meet your assembly requirments worldwide.

The INSIGHTqc™ offers advanced tightening control and a simple user experience to improve efficiency on production lines, while getting the job done right, every time.

SIMPLE

EXPERTISE NOT REQUIRED

FLEXIBLE

EASILY IMPLEMENT CHANGE

CAPABLE

MEET YOUR REQUIREMENTS

WHAT DOES THIS MEAN TO ME?	EXPERTISE NOT REQUIRED	EASILY IMPLEMENT CHANGE	MEET YOUR REQUIREMENTS
	■ Save on selection, training and installation costs	■ Reduce line rebalancing costs	■ Get the job right, every time
	■ Reduce errors and downtime	■ Easy line integration	■ Assurance via traceability
	■ Remove user dependencies	■ Remove device dependency	■ Optimize your productivity

HOW DOES INGERSOLL RAND PROVIDE VALUE?			
	■ Intuitive, visual programming interface	■ Web based programming use any operating system via any browser	■ Touch screen interface
	■ Plug and play accessories and protocols	■ Meets current industry communication needs	■ Industry leading cycle data storage
	■ Backwards capability	■ Adjustable to meet any tightening control requirements	■ Robust audit and system logs
	■ Integrated backup and recovery	■ Integrated logic controls	■ Advanced tightening strategies and features
	■ Bundled controller options	■ Easy hardware and software upgrades	■ Onboard diagnostics
	■ Context specific integrated HELP		■ Integrated statistical process controls
			■ Preventative maintenance alarms
			■ Configurable email alerts

SIMPLY INSIGHTFUL

The controller's web-based software eliminates device dependencies and enables full programming capability with any device that can run an internet browser, including smart phones, tablets or computers. The INSIGHTqc™ controller is easy to integrate with the manufacturing line, provides flexible logic controls for job sequencing and helps reduce line rebalancing costs through a simple and intuitive user interface.

Ingersoll Rand®

INSIGHTqc™ CONTROLLER FEATURES

Integrated carrying handle

Power indicator

Integrated wall mount

7-in full color touch screen

SSD card

INSIGHTqc
Process Communication Module
Model / Serial Number   QCD11 / P160500001

IDENTIFICATION

INGERSOLL RAND

System indicators

- Factory connection
- Wireless connection (future)
- Link status
- Fault detected

Whiteboard & QR code

Ethernet ports 10/100 & 10/100/1k

6 Position connector

1. +24V	5. High speed stop
2. 24vcom	6. High speed
3. E-stop	stop com
4. E-stop com	

USB 2.0 ports (4)

Fieldbus card slot

- Ethernet IP
- Profinet
- Profibus
- Devicenet
- Others

IP reset button

⚠ WARNING
ADVERTENCIA
AVERTISSEMENT

GFI/20 AMP circuit breaker

Tool connector

SIMPLE   **FLEXIBLE**   **CAPABLE**

QE SERIES HANDHELD TOOLS

The ultimate world-class combination — QE Series tools and INSIGHTqc controllers — team up to make meeting your critical fastening requirements simple. Offering flexibility, these durable, ergonomically designed tools are easy to use — no experience needed.

SIMPLE   **FLEXIBLE**   **CAPABLE**

FEATURES

- Torque range from 0.3 to 400 Nm
- Closed-loop transducerized control delivers excellent capability and traceability
- Compact and lightweight design
- Optional bright LED headlights illuminate work space
- Multicolored light ring and TactAlert, our tactile feedback option, provide clear operator feedback
- Seamlessly runs on any Ingersoll Rand® controller
- ESD-safe and RoHS-compliant options
- High durability cable
- Comfortable, ergonomically contoured grip
- Easy to use push-button reverse and indicator light options
- Highly configurable platform allows users to select their output torque, body style, actuation and spindle type to create the perfect tool for the application

Ingersoll Rand®

QE SERIES FEATURES

True closed-loop transducerized control

Brushless DC motor & heavy-duty gearing

Ergonomic reverse ring

Multiple actuation options

Multiple drive and head size options

LED headlight on select models

Multiple mounting & suspension options

Preventive maintenance alarms

Multi-color indicator lights

Ergonomically designed handles

Custom attachments available

TactAlert provides positive tactile feedback to operator of NOK

Advanced tightening strategies

High temperature motor protection

Programmable momentary switch

SIMPLE   **FLEXIBLE**   **CAPABLE**

QM SERIES FIXTURED TOOLS

QM Series tools are the workhorse for your fixtured spindle applications. With four motor size platforms that provide broad torque, speed and size flexibility, Ingersoll Rand® QM spindles are different, by design. They are not only simple to use, but also offers excellent versatility that enables them to deliver the highest levels of performance in the industry. This series of spindles can be used in a wide range of assembly applications and fixture designs, offering ultimate flexibility.
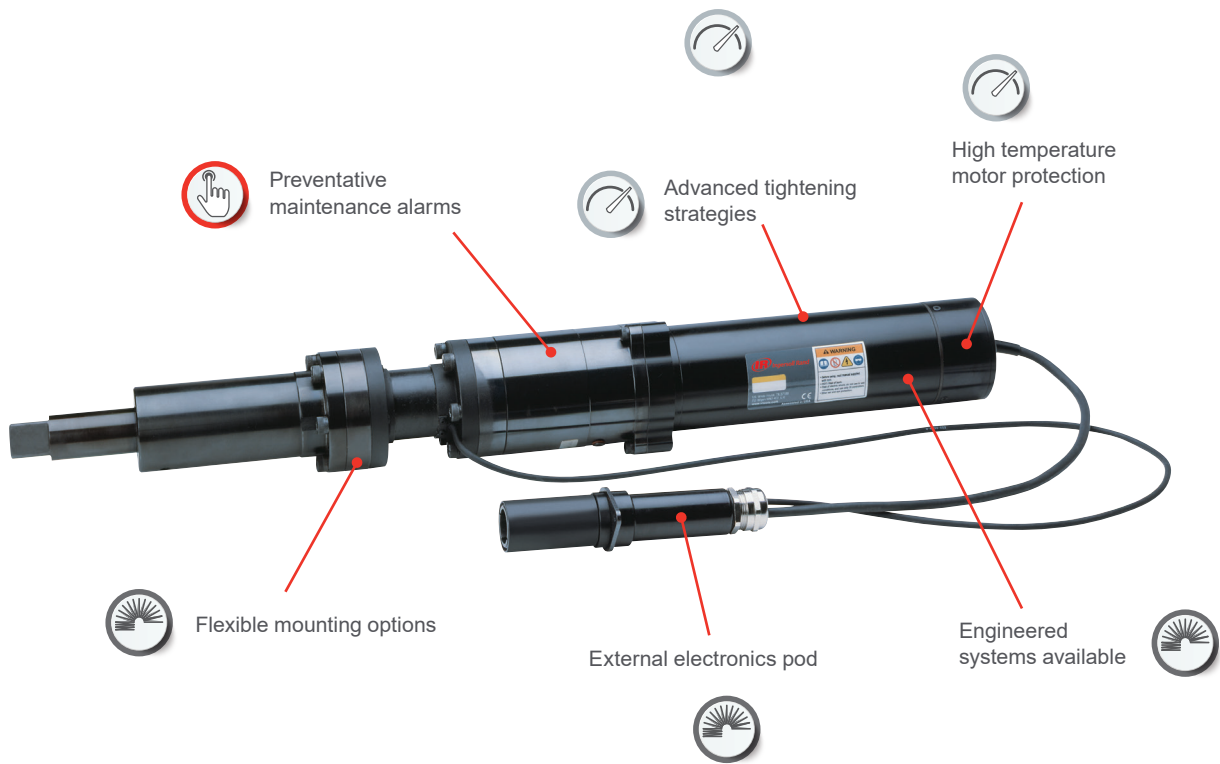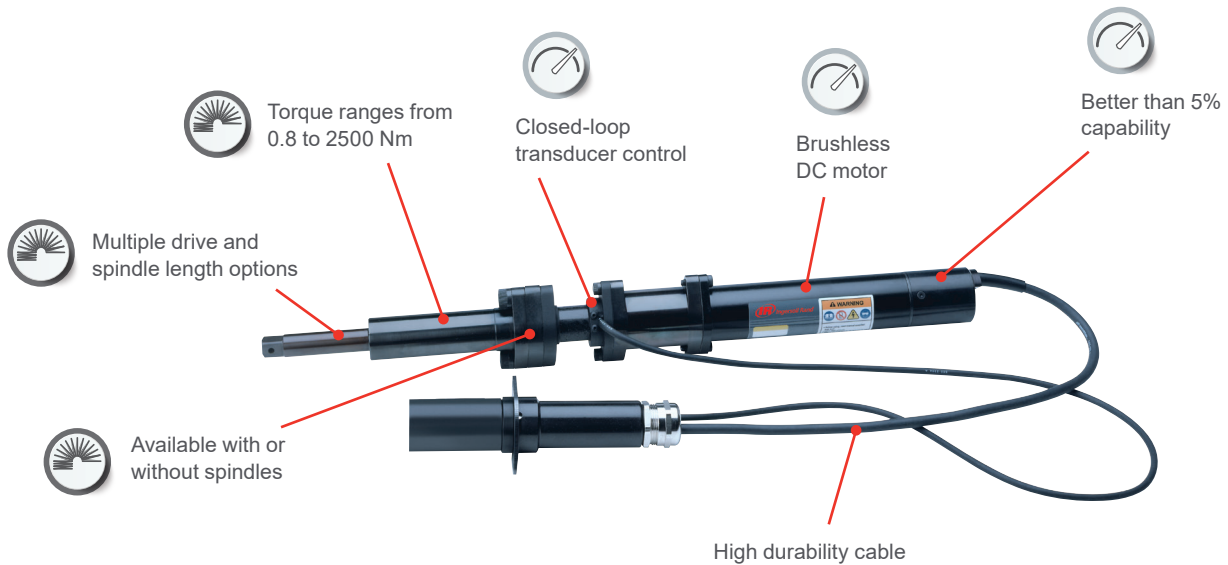
SIMPLE **FLEXIBLE** **CAPABLE**

FEATURES

- Torque coverage from 0.8 to 2500 Nm
- Closed-loop transducerized control delivers better than 5% capability across all four motor platforms
- Highly durable with minimal preventive maintenance required
- Seamlessly runs on any Ingersoll Rand® controller
- Multiple mounting options provide system integration flexibility
- External electronics pod simplifies mounting and connectivity
- Onboard motor temperature sensor protects tool damage due to excessive heat
- Easy to service — no special tools required
- Highly configurable platform allows users to select output torque, body style and spindle type to create the perfect tool for the application

Ingersoll Rand®

QM SERIES FEATURES

Torque ranges from 0.8 to 2500 Nm

Closed-loop transducer control

Brushless DC motor

Better than 5% capability

Multiple drive and spindle length options

Available with or without spindles

High durability cable

Preventative maintenance alarms

Advanced tightening strategies

High temperature motor protection

Flexible mounting options

External electronics pod

Engineered systems available

SIMPLE   **FLEXIBLE**   **CAPABLE**

SYSTEM ACCESSORIES

The INSIGHTqc™ Controller provides optimal flexibility for the workstation with compatibility to a variety of plug n play accessories to maximize productivity for your manufacturing line. A variety of cables and extension cables are available to customize your production setup.

ACCESSORIES FOR ANY APPLICATION

- Socket selector trays
- 8 x 8 24 VDC USB DIO box
- Bit selector trays
- Light towers
- Bar code scanners
- USB to RS-232 serial adapter
- Mounting brackets
- Protective covers
- Reaction bars
- Extended lever kits

Model	Description	Order Number
QC-SKTR	Socket Tray, 4 Position	47615828001
QC-TL-4	USB Tower Light	47601629001
QC-ADPT-1	Serial Interface Adaptor	47601630001
QC-DIO-8CH	Digital I/O Box, 8 Channel	47617332001
QC-BC-SCAN-1	Bar Code Scanner, Cabled USB; HD	47625754001
QC-BC-SCAN-2	Bar Code Scanner, Cabled USB; LD	47625755001
QC-BC-SCAN-WL	Bar Code Scanner, HD, Wireless with USB Cradle	47625756001
QC-DIO-366-K	DIO Box Mounting Bracket Kit	47628739001

DIO Box

Socket Tray

Bit Tray

USB to Serial Adapter

Bar Code Scanners

Ingersoll Rand

CUSTOM SOLUTIONS

Engineered to Your Unique Specifications

Custom engineered assembly solutions are available for more complex applications with requirements such as adjustable bolt centers, multiple spindles, specialized clamping, indexing, custom fixture design and automation.

Ingersoll Rand's worldwide network of solution centers can serve your 'rail-to-floor' project requirements from start to finish. Our full-range offering starts with joint analysis and process audits, then spans to system design, project management, installation and after-sales support.

ASSEMBLY PRODUCT OFFERINGS

RAIL SYSTEMS
Enclosed rail forms the backbone of any ergonomic handling system. Ingersoll Rand® offers four enclosed rail profiles in lightweight aluminum and durable steel.

JIB CRANES
Jib cranes are perfect for short transfer applications. They use precision Ingersoll Rand-manufactured aluminum or steel rail creating an ergonomic, easy to move boom.

BALANCERS
These components allow users to both lift and 'balance' the load. This enables precise manual movement and placement with the 'jogging' required with traditional hoists.

ARM SYSTEMS
Ingersoll Rand arm systems are designed for reaching in, under and around obstacles, allowing an operator to precisely and effortlessly position loads.

HOISTS
Models available in air, electric, hydraulic and manual drives. Ingersoll Rand hoists come with a wide array of options and accessories.

PRECISION FASTENING
We offer a wide range of tools from single to multiple spindles in electric and pneumatic configurations.

SIMPLE   FLEXIBLE   CAPABLE

CONTROLLER MODELS

The INSIGHTqc™ Controller is 100% compatible with our QE and QM tools. With the INSIGHTqc™, these tools will have 50K tightening records and 50K tightening traces – compared to 10 to 30K in competitors' products – which will let users understand all facets of the tightening process – torque, angle, time and date.

| | SYSTEM OPTIONS | | | | FIELDBUS OPTIONS | | | | MES OPTIONS | | | | |
Model	Series	Display	Power	Hardware	Ethernet/P	ProfiNet	ProfBUS	DeviceNET	IR Ethernet EOR	Atlas Copco Open Protocol	ToolsNet	VW XML 2.1	Nissan SerialEOR
QCD11	QC	Display	120V AC	Standard					•				
QCD11-F	QC	Display	120V AC	Standard	•	•			•				
QCD11-M	QC	Display	120V AC	Standard					•	•	•	•	•
QCD11-FM	QC	Display	120V AC	Standard	•	•			•	•	•	•	•
QCD12-F	QC	Display	120V AC	Standard plus ProfiBus Card	•	•	•		•				
QCD12-FM	QC	Display	120V AC	Standard plus ProfiBus Card	•	•	•		•	•	•	•	•
QCD13-F	QC	Display	120V AC	Standard plus DeviceNet Card	•	•		•	•				
QCD13-FM	QC	Display	120V AC	Standard plus DeviceNet Card	•	•		•	•	•	•	•	•
QCD21	QC	Display	230V AC	Standard	•	•			•				
QCD21-F	QC	Display	230V AC	Standard	•	•			•				
QCD21-M	QC	Display	230V AC	Standard					•	•	•	•	•
QCD21-FM	QC	Display	230V AC	Standard	•	•			•	•	•	•	•
QCD22-F	QC	Display	230V AC	Standard plus ProfiBus Card	•	•	•		•				
QCD22-FM	QC	Display	230V AC	Standard plus ProfiBus Card	•	•	•		•	•	•	•	•
QCD23-F	QC	Display	230V AC	Standard plus DeviceNet Card	•	•		•	•				
QCD23-FM	QC	Display	230V AC	Standard plus DeviceNet Card	•	•		•	•	•	•	•	•

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Learn more at www.ingersollrand.com