



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

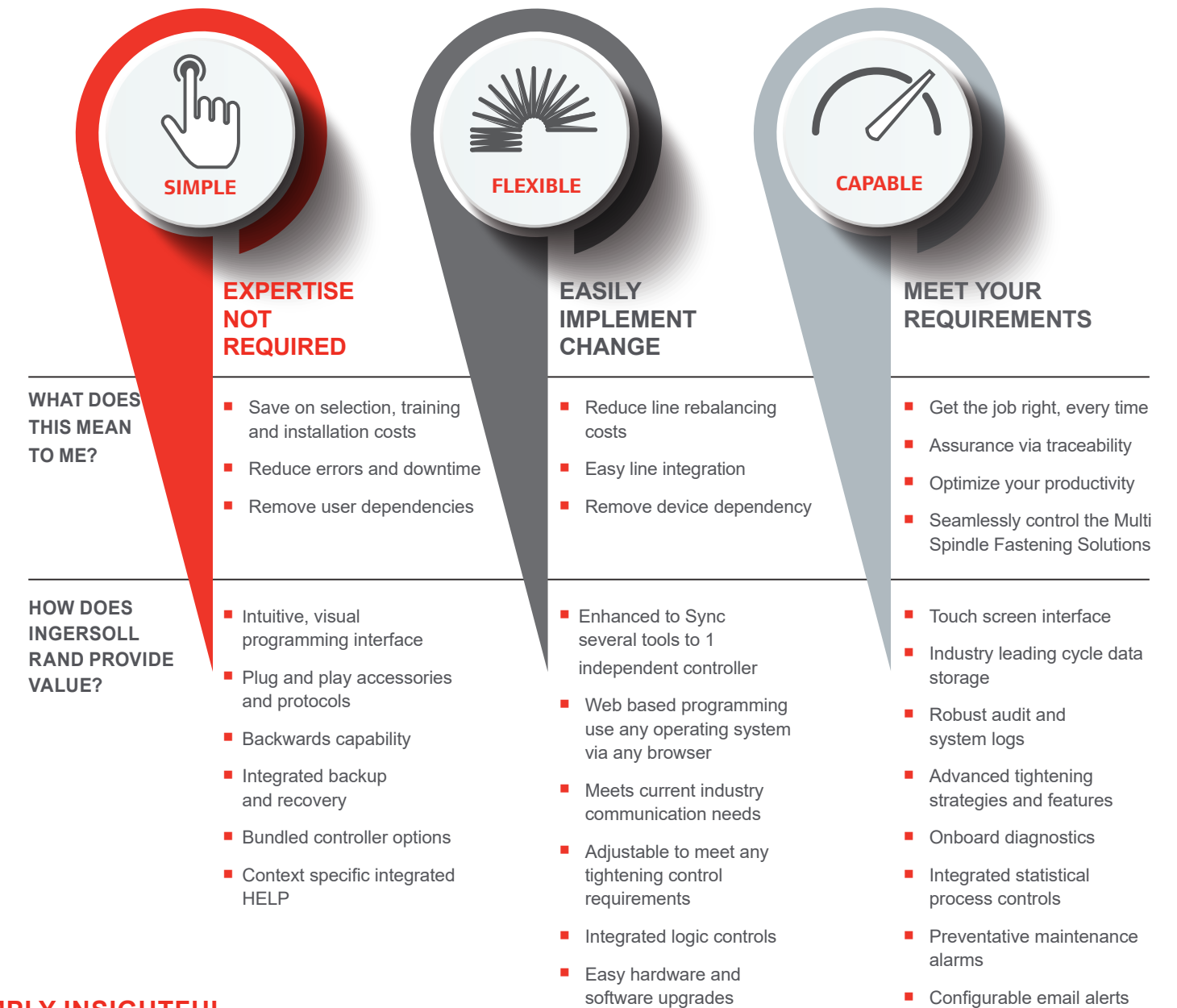


INSIGHTqc™ CONTROLLER



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 requirements 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.



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. The INSIGHTqc Controller Platform has been enhanced to support both single & multi-spindle fastening applications, syncing multiple uses and applications to one controller platform.

INSIGHTqc™ CONTROLLER FEATURES



ONE CONTROLLER COUNTLESS CAPABILITIES

Ingersoll Rand's INSIGHTqc™ Controller Platform has been enhanced to support both Single-Spindle and Multi-Spindle fastening applications, syncing multiple uses and applications to one single controller platform. Starting with its simplified setup, this upgrade reduces wasted time and allows its users to quickly adapt to changing needs on the spot—all without the burden of managing multiple platforms.

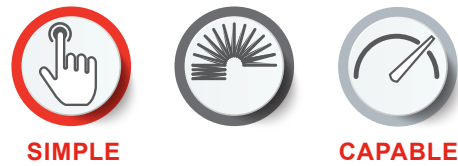
- **Simplicity:** Now offered as a single controller platform for Multi- and Single-Spindle applications, the simplicity of the INSIGHTqc™ Controller Platform cannot be overstated. By using a single controller to navigate multiple needs and functions, this advanced system simplifies setup, streamlines operations and empowers you to complete intricate jobs accurately.
- **Flexibility:** Designed with the ability to quickly adapt to every changing need without the burden of managing multiple platforms, this single controller system features first-rate flexibility and decreased downtime. And, thanks to its flexibility in programming, users can customize and adjust settings based on their specific needs.
- **Productivity:** Backed by a unified controller platform that's easy to use and navigate, the Multi-Spindle fastening application works cohesively with the INSIGHTqc™ controller to keep your efficiency at an all-time high. Users will appreciate its ability to easily modify program parameters to switch between different profiles, making it simple to accommodate variations in fastener types, torque requirements or assembly configurations.
- **Performance:** As a direct result of its ability to apply torque with precision and consistency across all spindles, this newly enhanced system reduces the likelihood of product failures, loose connections or performance issues, resulting in higher product reliability and overall quality.

Our newly enhanced INSIGHTqc™ controller system works seamlessly with our Multi-Spindle Fastening Solutions to save time, effort and space—without sacrificing Ingersoll Rand's trademark toughness and reliability.



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.



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

QE SERIES FEATURES



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

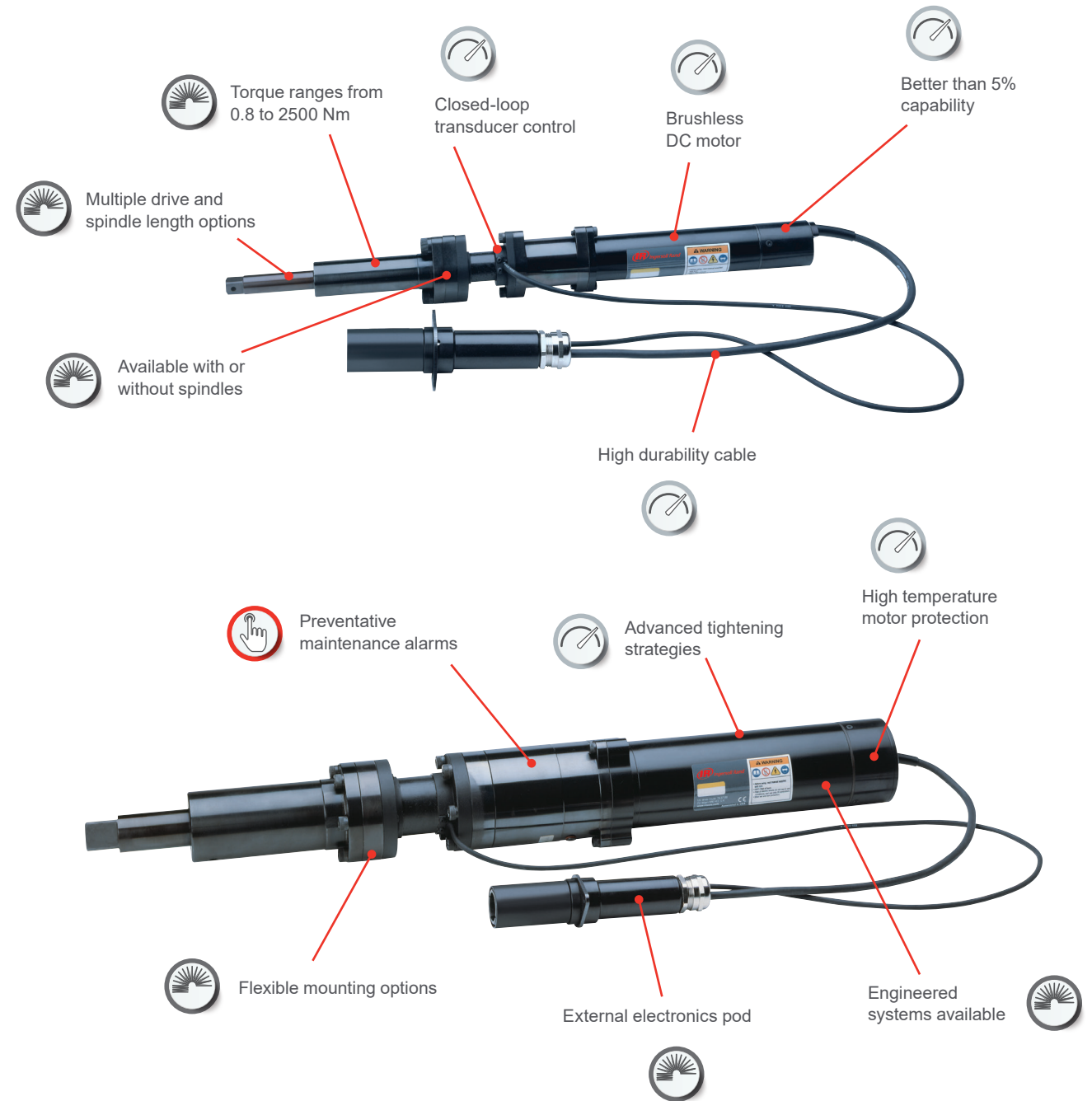


CAPABLE

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

QM SERIES FEATURES



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-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

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

SYSTEM ACCESSORIES

We offer a wide range of accessories that offer ease of use and flexibility to meet your specific application needs. The INSIGHTqc™ controller is compatible with a variety of plug and play accessories to maximize productivity for your manufacturing line. And with four onboard USB ports, up to four accessories can be used simultaneously.

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



8 x 8 24 VDC USB DIO Box



USB to RS-232 Serial Adapter



Socket Selector Tray



Bar Code Scanners



Bit Selector Tray



Light Tower

For a specific part number and ordering details, please refer to the accessories guide at irtools.com/assemblyaccessories

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.

Model	SYSTEM OPTIONS				FIELDBUS OPTIONS		MES OPTIONS				
	Series	Display	Power	Hardware	Ethernet/P	ProfiNet	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	•	•	•	•	•	•	•
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	•	•	•	•	•	•	•

Multi-Spindle Software License

Part Reference	Description	BOM
MS-SW-OPT-1	Multi Spindle Software License, OPT – 1	1. Receptacle, flash drive 2. Adapter, USB to Ethernet 3. Activation Card 4. Information Label 5. Label
MS-SW-OPT-2	Multi Spindle Software License, OPT – 2	
MS-SW-OPT-3	Multi Spindle Software License, OPT – 3	

If customer wants to support 10 spindles, we can cater to requirements by providing licenses in one of the below combination :

- OPT 3 X 3 + OPT 1
- OPT 2 X 5

*In this case License Option (OPT) represents number of spindle licenses



Learn more at www.ingersollrand.com

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.