Ingersoll Rand

Pulse Systems Tools, Qualifiers, and Controllers

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Because every assembly is critical



There's much more to an assembly application than merely putting wrench to bolt. It's an intricate matter of linking tool users and fasteners to deliver an uncompromised combination of ergonomics, speed, and accuracy.

The solution: Ingersoll Rand Pulse Systems.

High-speed, reactionless fastening with power-to-weight ratios similar to impact tools.

Consistent torque with fully customizable operator feedback, process control, and data output options.

Excellent performance and durability

with enhanced ergonomics for operator comfort and productivity.

Trusted tools, proven experience

At Ingersoll Rand, we have extensive experience with threaded fastening processes. For over 100 years, we've worked with many of the world's leading manufacturers in various industries, and we understand the interface of the tool and operator. We know how to leverage the power of ergonomically designed equipment to maximize productivity and inspire progress.

Ingersoll Rand Fastening Portfolio

Ingersoll Rand offers a full line of production fastening equipment, including air and electric screwdrivers, nutrunners, drills, riveters, pulse tools, as well as hand-held and multi-spindle fixtured DC nutrunners. Whether you need a solution for a single, specific application or an entire assembly line, you can trust our century of tool design experience to meet your needs.



	PULSI
	Non shut-of
Fastening Strategies	
Angle Monitoring	
Torque Traceability	
Closed-Loop Torque Control	
Visible OK / NOK Signaling	
Process Control	
Batch & Cycle Counting	
Operator Error Proofing	
Lube Free Air Motors	V
Easy Torque Adjustment	V
High Speed, Compact, Lightweight	V
Reactionless One-Handed Operation	

Standard Pulse Tools Q Series

Ingersoll Rand offers a full line of standard shutoff and non-shutoff pulse tools in pistol, angle, and in-line configurations to meet your needs. These extremely lightweight tools offer excellent power, speed, accuracy, and ergonomics.

The Q-Series is the latest generation of pulse tools engineered with the end-user in mind — making them the tools of choice for operators looking for the best combination of speed, ergonomics, and accuracy.

If you're looking for error proofing and process control, both shutoff and non-shutoff pulse tools are fully compatible with the QC Air Tool Qualifier.



Shutoff Pulse Tools

			Ē	1 min.	Â				
	Model		ft-lb (Nm)	rpm	lb (kg)	in (mm)	in (mm)	cfm	Drive
Q SERIES									
Pistol									
	40PSQ1	M4 - M5	4 - 10 (5 - 13)	5000	2.1 (1.0)	7.2 (183)	0.73 (19)	13	1/4″ 🔿
	QS60PQ1	M6	4.4 - 9.6 (6-13)	5300	2.1 (1)	6.5 (164)	0.9 (23)	12	1/4″ 🔿
H	QS60P3	M6	5.2 - 11.4 (7-15.5)	5300	2.4 (1.1)	6.5 (164)	0.9 (23)	12	3/8″ 🗋
	QS70PQ1	M6 - M8	9.6 - 20.7 (13-28)	6800	2.4 (1.1)	7 (177)	0.9 (23)	13	1/4″ 🔿
	QS70P3	M6 - M8	11.1 - 23.6 (15-32)	6800	2.4 (1.1)	7 (177)	0.9 (23)	13	3/8″ 🗋
1	QS80P3	M8	22.1 - 40.6 (30-55)	6800	2.4 (1.1)	7.4 (187)	1 (25)	16	3/8″
	90PS4	M10 - M12	37 - 59 (51 - 78)	5000	4.4 (2.0)	7.9 (201)	1.15 (29)	18	1/2″

Non-Shutoff Pulse Tools

Ρ

			ñ	1 min.	2				
	Model		ft-lb (Nm)	rpm	lb (kg)	in (mm)	in (mm)	cfm	Drive
Q SERIES									
Pistol									
	46PQ1	M5 - M6	10 - 18 (14 - 24)	8000	2.0 (0.9)	7.3 (185)	0.7 (18)	12	1/4″ 🔿
	46P3	M5 - M6	8 - 21 (16 - 29)	8000	2.0 (0.9)	7.3 (185)	0.7 (18)	12	3/8″ 🗌
	Q70PQ1	M6 - M8	15 - 20 (20 - 28)	7000	1.8 (0.8)	5.2 (131)	0.9 (22)	12	1/4″ 🔿
	Q70P3	M6 - M8	18 - 25 (24 - 35)	7000	1.8 (0.8)	5.2 (131)	0.9 (22)	11	3/8″ 🗌
	Q80PQ1	M8	18 - 25 (24 - 35)	7000	1.9 (0.9)	5.4 (138)	0.9 (22)	12	1/4″ 🔿
	Q80P3	M8	25 - 36 (34 - 50)	7000	1.9 (0.9)	5.4 (138)	0.9 (22)	12	3/8″ 🗌
	Q90P3	M8 - M10	35 - 48 (47 - 65)	6500	2.1 (1.0)	5.8 (148)	0.9 (23)	14	3/8″ 🗌
	Q110P4	M10 - M12	48 - 74 (65 - 100)	5500	3.0 (1.4)	6.5 (164)	1.1 (27)	20	1/2″ 🗌
	Q120P4	M12	70 -95 (95 - 130)	6600	3.7 (1.7)	6.9 (175)	1.3 (29)	20	1/2″ 🗌
	Q140P4	M14	95 - 118 (130 - 160)	5400	4.9 (2.2)	7.5 (190)	1.3 (33)	30	1/2″
	140P6	M16	78 - 174 (105 - 235)	3200	6.8 (3.1)	8.9 (226)	1.4 (36)	26	3/4″



Loved the lightweight and compact size of Ingersoll Rand QS pulse tools. They reset much quicker than other tools we have used, and after the initial setup, required fewer adjustments over time.

- Tooling Engineer, Diesel Engine Manufacturer

Standard Pulse Tools

Power Pulse

The larger sized Power Pulse Series models offer extended torque coverage in a single tool which provides flexibility to customers who intend to use the tool on multiple applications.

Shutoff Pulse Tools

		+++++	Â	1 min.	2)))	X
	Model		ft-lb (Nm)	rpm	lb (kg)	in (mm)	in (mm)	cfm	Drive
POWER PULSE									
Pistol									
	500PS3	M6 - M8	10 - 40 (14 - 54)	10500	4 (1.8)	7.9 (201)	1.2 (30)	12	3/8″ 🗌
	700PS3	M8 - M10	20 - 60 (27 - 81)	9250	4.5 (2.0)	8.5 (216)	1.2 (30)	14	3/8″ 🗌
	900PS4	M10	30 - 70 (41 - 95)	8000	5.9 (2.7)	9.1 (231)	1.3 (33)	14	1/2″ 🗌
	1100PS4	M10 - M12	40 - 85 (54 - 115)	6500	6.2 (2.8)	9.2 (234)	1.3 (33)	16	1/2″ 🗌
	1900PS4	M12 - M14	70 - 140 (108 - 190)	7000	8.6 (3.9)	10.2 (259)	1.5 (38)	18	1/2″

Non-Shutoff Pulse Tools

		→	Ē	1 min.	Â		↓ ↑))))		X
	Model		ft-lb (Nm)	rpm	lb (kg)	in (mm)	in (mm)	cfm	Drive
POWER PULSE									
Pistol									
	100PQ1	M4 - M5	3 - 8 (4 - 11)	9300	1.6 (0.7)	5.6 (142)	0.7 (18)	12	1/4″ 🔿
	180PQ1	M4 - M6	6 - 22 (8 - 30)	10500	2.2 (1.0)	6.5 (165)	0.9 (23)	9	1/4″ 🔿
	280PQ1	M6 - M8	10 - 26 (14 - 35)	9500	2.5 (1.1)	7.0 (178)	0.9 (23)	11	1/4″ 🔿
	280P	M6 - M8	12 - 28 (16 - 38)	9500	2.5 (1.1)	7.0 (178)	0.9 (23)	11	3/8″
	380PQ1	M8	15 - 32 (20 - 44)	8500	2.9 (1.3)	7.0 (178)	1.0 (26)	11	1/4″ 🔿
	380P	M8	18 - 36 (24 - 49)	8500	2.9 (1.3)	7.9 (178)	1.0 (26)	11	3/8″
	500PQ1	M8 - M10	18 - 38 (38 - 52)	8500	3.2 (1.5)	6.5 (165)	1.2 (31)	12	1/4″ 🔿
	500P	M8 - M10	20 - 43 (27 - 58)	8500	3.2 (1.5)	6.5 (165)	1.2 (31)	12	3/8″
	700P	M8 - M10	24 - 58 (33 - 79)	8500	3.6 (1.6)	6.5 (165)	1.2 (31)	14	3/8″
	900P	M10	30 - 80 (41 - 109)	7500	4.6 (2.1)	7.9 (200)	1.3 (33)	14	1/2″
	1100P	M10 - M12	35 - 90 (48 - 122)	5000	4.9 (2.2)	8.2 (208)	1.4 (36)	16	1/2″
Inline									
	100SQ1	M4 - M5	3 - 9 (4 - 12)	10000	1.8 (0.8)	8.9 (226)	0.8 (20)	12	1/4″ 🔿
	180SQ1	M4 - M6	6 - 22 (8 - 30)	9000	2.0 (0.9)	8.7 (221)	0.9 (22)	9	1/4″ 🔿
	280SQ1	M6 - M8	7 - 26 (10 - 35)	8000	2.1 (1.0)	9.0 (229)	0.9 (22)	11	1/4″ 🔿
	380SQ1	M8	15 - 32 (20 - 44)	8500	2.6 (1.2)	9.1 (231)	1.0 (25)	11	1/4″ 🔿
Angle									
	500A	M6 - M8	12 - 30 (16 - 41)	7000	3.3 (1.5)	10.5 (267)	1.1 (27)	11	3/8″
0	700A	M8 - M10	19 - 36 (26 - 49)	5500	4.4 (2.0)	11.2 (284)	1.1 (27)	12	3/8″

71 – 82 dBa	1/4" NPT	3/8" (10 mm)
75 – 78 dBa	1/4" NPT	1/2" (13 mm)
79 – 85 dBa	1/4" NPT	3/8" (10 mm)
71 – 76 dBa	1/4" NPT	3/8" (10 mm)
	71 - 82 dBa 75 - 78 dBa 79 - 85 dBa 71 - 76 dBa	71 - 82 dBa 1/4" NPT 75 - 78 dBa 1/4" NPT 79 - 85 dBa 1/4" NPT 71 - 76 dBa 1/4" NPT

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QC Air Tool Qualifiers



Ingersoll Rand Air Tool Process Qualifiers enable users to improve quality and process efficiency in their assembly line applications.

Qualifiers provide error proofing, batch and cycle time counting, process flow control, and factory floor networking capabilities to ensure that each and every fastener is installed per their specifications.

In addition, QC100 qualifiers provide shutoff capabilities when used with non-shutoff pulse and impact tools, allowing standardization across the plant floor.

Model	OK / NOK	Batch Count
For Use with Non-s	hutoff Tools	
QC100-S-K	•	
QC100-N-K	•	
For Use with Shuto	ff Tools	
QC200-S-K	•	•
QC200-N-K	•	



Error-Proofing

Easy Setup

Tool Compatibility

• NO tool modifications are required (such as special valves, porting).

Process Qualification

• Provides OK/NOK signal based on air flow rundown signature.

• Verifies batch/gang count and cycle time completion.

• Multiple parameter sets for different joint applications.

Compatible with PFCS protocol.

 Optional hose light gives operator visual feedback right at the tool.

• Detects rehits, cross-threads, and early throttle release.

• Simple menu prompts quickly lead users through parameter setup. Process Flow Control and Alarms.

• I/O ports interface with alarms, lights, or process control devices. Total cycle count alarm prompts

for preventive maintenance.

Shutoff Capability

 $\boldsymbol{\cdot}$ Solenoid Valve provides shutoff capability on non-shutoff tools.

 \cdot Independent of brand — works with Ingersoll Rand pulse, impacts and compatible nutrunners as well as many competitive models.



Length	
16′ (4.8 m)	
25′ (7.6 m)	
16′ (4.8 m)	
25′ (7.6 m)	

Optional hose lights are compatible with QC100 and QC200 air tool qualifiers.



Transducerized Pulse Tools

Ingersoll Rand combines the power, speed and ergonomics of the pulse tool with the sophistication of a torque transducer and microprocessor to create a more powerful, convenient and accurate fastening system. The closedloop system offers all the advantages of a pulse tool, while providing advanced torque control and data output typically found in a DC fastening system. The new angle encoded series includes the ability to monitor the fastening angle during the tightening process.

- Strain gauge on output shaft and close to the socket for more accurate measurement of torque.
- Non-contacting pick-up reduces signal noise, improving torque repeatability.
- Torque readout.
- · Angle monitoring available.
- End-of-run data. Operator visual and audible notification
- I/O signals for line control. Simple programming for
- fast and easy set-up.

Pulse Tool System Layout



Air cooling system extends oil change

intervals

Angle encoder

Adjustment bolt

Reverse lever

Soft rubber gri

Tool cable

Transducer

03

Operation

- Operator or factory system selects one of eight possible configurations
- Operator engages pulse tool to work piece
- **③** Transducer senses torque in anvil with each pulse and sends data to the controller
- buzzer or LED 6 a. Interprets data and compares it to selected

 - f. I/O signals sent to PLC or other devices (8)
- c. Upon reaching shut-off decision, sends signal to solenoid valve G

b. Makes decision to either shut off tool or

Ontroller:

parameters

continue

d. OK, NOK, or "gang complete" sent to tool

Buzzer

or LEDs

Dual-lobed

air motor

Fwin-blade

impulse

mechanism

Rotatable

exhaust

- e. EOR data is sent to RS-232C and printer ports 🕤
- g. System resets and runs self-diagnostics test **9**

The new QXP Series pulse tools offer a new level of speed, convenience, accessibility, and comfort to the assembly process. A complete range of tools to cover the most popular bolt sizes along with YETC Series controllers make these the tools of choice for applications requiring the accuracy and process control offered by system pulse tools.

Transducerized Pulse Tools

			Ē	1 min.	2				
	Model		ft-lb (Nm)	rpm	lb (kg)	in (mm)	in (mm)	cfm	Drive
QXP Series									
Pistol									
	QXP60P6	M6	7.4 – 14.5 (10 – 19.5)	6,000	2.8 (1.26)	7.0 (179)	0.8 (21)	9.5	3/8″ 🗋
	QXP60Q4	M6	6.3 –11.8 (8 – 16)	6,000	2.8 (1.26)	7.0 (179)	0.8 (21)	9.5	1/4″ 🔿
	QXP70P6	M6 – M8	13 – 24 (18 – 33)	7,000	2.8 (1.26)	7.0 (179)	0.8 (21)	11.3	3/8″ 🗋
	QXP70Q4	M6 – M8	11 – 20 (15 – 27)	7,000	2.8 (1.26)	7.0 (179)	0.8 (21)	11.3	1/4″ 🔿
	QXP80P6	M8	17 – 33 (24 – 46)	7,000	3 (1.3)	7.3 (186)	0.8 (21)	11.3	3/8″ 🗌
	QXP90P6	M8 – M10	26 - 44 (35 - 60)	6,500	3.3 (1.5)	7.7 (195)	0.9 (23)	14.5	3/8″ 🗌
T¥	QXP110P8	M10 - M12	35 – 70 (48 – 95)	5,500	4.1 (1.86)	8.2 (209)	1.0 (25.6)	18.7	1/2″ 🗋
	QXP120P8	M12	48 – 92 (65 – 125)	5,900	5.4 (2.46)	8.8 (223)	1.1 (29.0)	21.2	1/2″ 🗋
	QXP140P8	M14	55 – 114 (75 – 155)	5,200	6.3 (2.86)	9.3 (235)	1.1 (29.0)	27.7	1/2″
	QXP150P8	M16	81 - 162 (110 - 220)	4,200	7.5 (3.41)	9.6 (241)	1.3 (32.5)	27.9	1/2″ 🗋
Pistol — Angle Encoded									
	QXP600Q4	M6	6.3 - 11.8 (8.5 - 16)	6000	2.9 (1.34)	7.4 (189)	0.8 (21)	9.5	1/4″ 🔿
	QXP600P6	M6	7.4 - 14.5 (10 - 19.5)	6000	2.9 (1.34)	7.4 (189)	0.8 (21)	9.5	3/8″ 🗋
Ha	QXP700Q4	M6 - M8	11 - 20 (15 - 27)	7000	2.9 (1.34)	7.4 (189)	0.8 (21)	11.3	1/4″ 🔿
	QXP700P6	M6 - M8	13 - 24 (18 - 33)	7000	2.9 (1.34)	7.4 (189)	0.8 (21)	11.3	3/8″ 🗋
100	QXP900P6	M8 - M10	26 - 44 (35 - 60)	6500	3.3 (1.5)	8.1 (204)	0.9 (23)	14.5	3/8″ 🗋
4.4	QXP1100P8	M10 - M12	35 - 70 (48 - 95)	5500	4.3 (1.97)	8.7 (220)	1 (25.5)	18.7	1/2″ 🗋
1.4	QXP1400P8	M14	55 - 114 (75 - 160)	5200	6.6 (3)	9.7 (246)	1.1 (29)	27.7	1/2″ 🗋
YE Classic Series Pistol									
	YEX-120A	M5 – M6	2.6 - 6.5 (3.5 - 8.8)	7.000	3.2 (1.43)	8.8 (223)	0.93 (23.5)	8.8	1/4″ "🔿
	YEX-120	M5 – M6	2.9 - 7.2 (3.9 - 9.8)	7.000	3.2 (1.43)	8.7 (222)	0.93 (23.5)	8.8	3/8″
	YEX-150A	M5 – M6	3.6 - 11.1 (4.9 - 15)	9.000	3.2 (1.43)	8.8 (223)	0.91 (23.0)	10.6	1/4″ 🔿
	YEX-150	M5 – M6	4.0 - 13.3 (5.4 - 18)	9.000	3.2 (1.43)	8.7 (222)	0.91 (23.0)	10.6	3/8″
	YEX-501A	M6 – M8	11.1 - 31.7 (15 - 43)	8.200	4.4 (2.0)	8.9 (227)	1.04 (26.5)	12.4	1/4" 🔿
	YEX-501	M6 – M8	12.5 - 35 (17 - 48)	8,200	4.4 (2.0)	9.4 (234)	1.04 (26.5)	12.4	3/8″
	YEX-701	M8 – M10	18.4 - 55 (25 - 75)	8,000	4.9 (2.2)	9.7 (246)	1.04 (26.5)	13.4	3/8″
4	YEX-901	M10	23.6 - 65 (32 - 88)	6,100	5.9 (2.7)	10.1 (257)	1.32 (33.5)	17.7	1/2″
	YEX-1400	M10 - M12	38 - 105 (52 - 142)	5,900	7.7 (3.5)	10.5 (266)	1.34 (34.0)	22.3	1/2″
	YEX-1900	M12	43 - 123 (58 - 167)	5,800	9.0 (4.1)	10.9 (277)	1.54 (39.0)	22.3	1/2″
	YEX-3000	M16	90 - 209 (122 - 284)	4,000	14.1 (6.4)	12.2 (309)	1.57 (40.0)	25.8	3/4″
	YED-200	M18 – M20	129 - 265 (175 - 360)	2,300	15.0 (6.8)	12.0 (307)	1.60 (40.0)	38.9	3/4″
Inline									
	YEX-120SA	M5 – M6	2.7 - 5.3 (3.6 - 7.2)	10,000	2.6 (1.18)	10.5 (267)	1.22 (31.0)	8.8	1/4″ 🔿
	YEX-120S	M5 – M6	3.0 - 5.6 (4.0 - 7.6)	10,000	2.6 (1.18)	10.5 (267)	1.22 (31.0)	8.8	3/8″ 🗋
	YEX-150SA	M5 – M6	3.6 - 11 (4.9 - 15)	9,000	3.0 (1.43)	10.9 (276)	0.91 (23.0)	10.6	1/4″ 🔿
	YEX-150S	M5 – M6	4.0 - 13 (5.4 - 18)	9,000	3.2 (1.45)	10.8 (275)	0.91 (23.0)	10.6	3/8″ 🗌
	YEX-300SA	M6	5.8 – 15 (7.8 – 20)	8,000	4.0 (1.80)	12.3 (313)	1.06 (27.0)	11	1/4″ 🔿
	YEX-300S	M6	6.5 – 16 (8.8 – 22)	8,000	4.0 (1.80)	12.3 (313)	1.06 (27.0)	11	3/8″ 🗋
	YEX-500SA	M6 – M8	8.1 – 27 (11 – 37)	7,800	4.6 (2.10)	13.2 (334)	1.06 (27.0)	11.7	1/4″ 🔿
	YEX-500S	M6 – M8	9.6 - 30 (13 - 41)	7,800	4.6 (2.10)	13.1 (333)	1.06 (27.0)	11.7	3/8″ 🗌
	YEX-700S	M8	14.8 - 45 (20 - 61)	7,500	5.1 (2.30)	13.1 (333)	1.06 (27.0)	13.1	3/8″



Transducerized Controllers

YETC-210 Series

The YETC-210 series controllers are a microprocessor based system that provides accurate torque control when combined with the Ingersoll Rand torque control pulse tools. The system monitors the signals from the tool's transducer and then makes decisions based on the parameters that you have programmed into the tool.

The "R" series controllers provide the additional benefit of monitoring angle advancement when combined with an angle encoded tool. This unit provides additional strategies that can identify cross threading and double tightening (re-hit) along with high or low torque. Both units also provide "gang count", multiple configuration sets and other advanced tightening strategies.

Each unit contains the necessary cable, hose, solenoid valve, regulator and fittings to connect it to the appropriate QXP or YEX system wrench and your air system. The "R" series also includes the software to display actual torque, angle and time results through a PC.



Standard equipment

Controller							
10-meter tool cable							
Solenoid valve							
Tool air hose with quick couplers							
Air regulator							
Optional equipment							
15-meter tool cable	Y-7642-0908-0119						
20-meter extension tool cable	Y-7642-0908-0122						
3/8" solenoid valve Y-9191-1026-0000							
1/2" solenoid valve YETV-12KIT							
Printer	Y-CTZ						



Model		¢			Z	Configs	Angle
	mm	mm	mm	lb (kg)	volts		
YETC-210ETB	230	110	290	10(4.55)	117 VAC	8	No
YETC-210ETF	230	110	290	10(4.55)	117 VAC	4	No
YETC-210R	230	110	290	10(4.55)	117 VAC	8	Yes
YETC-210R-L*	230	110	290	10(4.55)	117 VAC	8	Yes
*Ethernet ready							



Features:

Torque display (Nm, ft-lb, in-lb, Kgf-m) Fastener count display Gang (batch) control RS-232C digital EOR data Printer port I/O signals Easy programming 8 selectable configurations Pulse count

Programmable parameters:

Maximum torque Minimum torque Target torque Threshold torque **Tool coefficient** Fast error (pre-tightened) Slow error (cross thread) Gang control Additional advanced parameters

Accessories

Impact Sockets - 6 pt Hex

	Туре	No. of Models	Output Range in (mm)
IMPACT SO	CKETS - IND	IVIDUALS	
3/8"	Standard	20	1/4" – 1" (6 – 22)
	Deep	18	5/16" – 1" (7 – 22)
	Universal	36	5/16" – 1" (8 – 22)
1/2"	Standard	32	5/16" - 2-1/4" (8 - 36)
	Deep	18	5/16" - 2" (8 - 36)
	Universal	36	5/16" - 1" (8 - 22)
3/4"	Standard	33	1/2" – 2 -1/2″ (17 – 50)
	Deep	33	1/2" – 2 -1/2" (17 – 50)
	Universal	29	11/16" - 1- 7/8" (17 - 46)

	Deep	33 1/2" - 2 -1/2" (17 - 50)	Industry Smart Transducers		<u> </u>			
	Universal	29 11/16" - 1- 7/8" (17 - 46)	Standard	Torque only Torque and angle		(in lb) ft lb	Nm	in
			TRANSDUC	ERS				
	No. of		ROTARY					
	Sets	Description	TR20H4	TRD20H4	TRDA20H4	(9.0 – 180)	1 - 20	1/4″
IMPACT SO	OCKETS - SETS		TR20S4	TRD20S4	TRDA20S4	(9.0 – 180)	1 – 20	1/4″
3/8"	7	3/8" Drive SAE & Metric; ✓ Standard Socket Sets; ✓ Deep Socket Sets; ✓ Universal Socket Sets	TR75S6	TRD75S6	TRDA75S6	2.8 – 55	3.8 – 7.5	3/8″
			TR180S8	TRD180S8	TRDA180S8	607 - 133	9 - 180	1/2″
			TR250S12	—	—	9.2 - 185	12.5 – 250	3/4″
1/2"	9	1/2" Drive SAE & Metric; ✓ Standard Socket Sets; ✓ Deep Socket Sets; ✓ Universal Socket Sets	TR500S12	TRD500S12	TRDA500S12	18.5 – 370	25 - 500	3/4″
			STATIONAR	RY				
			TS30S4	TSD28S4	_	1.1 – 22	1.5 – 30	1/4″
			TS150S6	TSD135S6	_	5.5 – 110	7.5 – 150	3/8″
3/4 "	2	3/4" Drive SAE & Metric; ✓ Standard Socket Sets; ✓ Deep Socket Sets;	TS300S8	TSD270S8	—	11 – 221	15 - 300	1/2″
			TS1000S12	TSD1000S12	_	37 – 738	50 - 1000	3/4″

All socket models and accessories can be seen in the accessories catalog listed below or at www.ingersollrandproducts.com/accessories.

Retainer rings can be used to retain sockets on Transducerized Pulse Tools. Relevant models can be found in the accessories catalog listed below or at www.ingersollrandproducts.com/accessories.







Assembly tools Audit wrench IRPS-1007-052 ASM-1106-128 IRPS-0109-008 IRPS-1107-043 IRPS-1007-053 IRITS-0909-076 IRPS-0907-044 IRITS-0810-069

DC Tools Fixtured systems QA4/6/8 tools Calibration

Calibration Equipment

Model	in-lb	Nm	External Transducer	Data Transfer	Auto Recognition	LCD Screen
TORQUE	TESTERS A	ND ANAL	YZERS			
EXTT SEF	ries — exp	ERT TORO	QUE TESTERS			
EXTT-1	0.88 - 8.8	0.1 - 1	— l	PC or Printe	r — 6	52 x 62 mm
EXTT-4	3.50 - 35	0.4 - 4	— l	PC or Printe	r — 6	52 x 62 mm
EXTT-12	10.6 - 106	1.2 - 12	— l	PC or Printe	r — 6	52 x 62 mm
EXTT-30	26.5 - 265	3.0 - 30	— I	PC or Printe	r — 6	52 x 62 mm
EXTA SERIES — EXPERT TOROUE TESTERS						

EXTA Smart or industry standard Yes PC or Printer Yes 62 x 62 mm

Spring Balancers

Model	No. of Model	s Ib (kg)	5 ft (m)	lb (kg)
BALANCERS	(SEE LI	TERATURE LISTED BE	ELOW FOR DETAIL	.S)
BHR Series*	3	0.875 - 5.5 (0.39 - 2.5	5) 4.25 (1.3)	2.6 – 2.9 (1.2 – 1.3)
BLD Series	4	0.9 - 6.6 (0.4 - 3.0)	5.2 (1.6)	1.3 – 1.5 (0.6 – 0.7)
BMD Series	13	2.2 – 22 (1 – 10)	6.5 - 8.2 (2 - 2.5)	4.4 – 8.8 (2 – 4)

*A hose reel balancer with 1/4" NPT input/output and 18.4 cfm flow capacity.













Accessories



Feed drill 52475-AT-C



Oi impacts IRITS-1008-118

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