Ingersoll Rand®

Pulse Tool Systems

REAL TOOLS FOR REAL WORK.™

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.

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 ergonomicaly designed equipment to maximize productivit and inspire progress.

Durability

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

Comfort

- Enhanced ergonomics for operator providing comfortable grip, low vibration and noise, and reactionless one handed operation

Reliability

- Consistent torque with fully customizeable operator feedback, process control, and data output options
- Proven performance in high and low torque models

Speed

- Non-Shut Off: 5,500 - 7,000 RPM
- Shut Off: 5,000 - 10,000 RPM

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.

Improved life-cycle costs
Patented cooling system, improved sealing, and dual bearing support mechanism

Environmentally enhanced
Lube-free, dual chamber air motor, and self-lubricating blades and cylinder reduce oil mist in the environment and provide extended durability

Quick and easy torque adjustment
One screw on both shutoff and non-shutoff models speeds the setup process while still providing good repeatability

Rapid reset mechanism
Responds quickly to speed up cycle times on shut-off models

Comfortable soft-touch grip
Ergonomically contoured to reduce operator fatigue

Reactionless one-handed operation
Low-force trigger and easily accessible reverse lever lets operators concentrate on their task

Ergonomic improvements
Provide greater useability with lighter, smaller, quieter, and lower vibration designs

Directional air exhaust
Silencer projects noise and exhaust away from the user and the workpiece

Shut off Pulse Tools

Features

- Torque range: 3 - 155 ft lbs (4.5 - 210 NM)
- Speeds: 4,000 - 7,000 rpm
- Easy torque adjustment for quick setup
- Auto-shut off feature stops airflow to tool when cycle is complete
- High-speed, compact, lightweight design
- Ergonomic design provides comfortable grip, low vibration and noise and reactionless one-handed operation
- Auto-shut off limits air consumption and tool wear
- Deters early throttle release; recommended when improved error-proofing is desired

Model	Fastener Size	ft-lbs (Nm)	rpm	lbs (kg)	in (mm)	in (mm)	in	cfm
PISTOL								
QS50P3	M5	3 - 6 (4.5 - 8)	4300	2.1 (0.95)	6.5 (164)	0.9 (23)	3/8″	8.9
QS50PQ1	M5	3 - 6 (4.5 - 8)	4300	2.1 (0.95)	6.5 (164)	0.9 (23)	1/4″	8.9
QS60P3	M6	5.1 - 11.4 (7 - 15.5)	5300	2.4 (1.1)	6.5 (164)	0.9 (23)	3/8″	12
QS60PQ1	M6	4.4 - 9.6 (6 - 13)	5300	2.1 (1)	6.5 (164)	0.9 (23)	1/4″	12
QS70P3	M6 - M8	11.1 - 23.6 (15 - 32)	6800	2.4 (1.1)	7 (177)	0.9 (23)	3/8″	13
QS70PQ1	M6 - M8	9.6 - 20.7 (13 - 28)	6800	2.4 (11)	7 (177)	0.9 (23)	1/4″	13
QS80P3	M8	22.1 - 40.6 (30 - 55)	6800	2.4 (1.1)	7.4 (187)	1 (25)	3/8″	16
QS110P4	M10 - M12	37 - 64 (50 - 85)	5800	3.3 (1.51)	7.6 (194)	2.2 (57)	1/2″	17.7
QS120P4	M12	52 - 85 (70 - 115)	5400	3.9 (1.8)	7.9 (201)	2.4 (62)	1/2″	18.4
QS140P4	M14	81 - 110 (110 - 150)	5200	4.6 (2.1)	8.4 (214)	2.6 (65)	1/2″	25
QS150P6	M16	103 - 155 (140 - 210)	4400	6.5 (3)	9.3 (237)	1.5 (39)	3/4″	25

Model			
QS50 - QS80	70 - 78 dba	1/4″ NPT	3/8″ (10 mm)
QS110 - QS150	80 - 86 dba	1/4″ NPT	3/8″ (10 mm)

Non-Shut off Pulse Tools

Features

- Torque range: 6 - 258 ft-lbs (7.5 - 350 NM)
- Speeds: 4,000 - 9,300 rpm
- Easy torque adjustment for quick setup
- Extremely lightweight, compact, and fast
- World-class power-to-weight ratio
- Ergonomic design provides comfortable grip, low vibration and noise, and reactionless one-handed operation
- Environmentally enhanced lube-free, dual-chamber air motor, and self-lubricating blades and cylinder reduce oil mist
- Non-shut-off tools are recommended for the majority of applications where speed and ergonomics are important

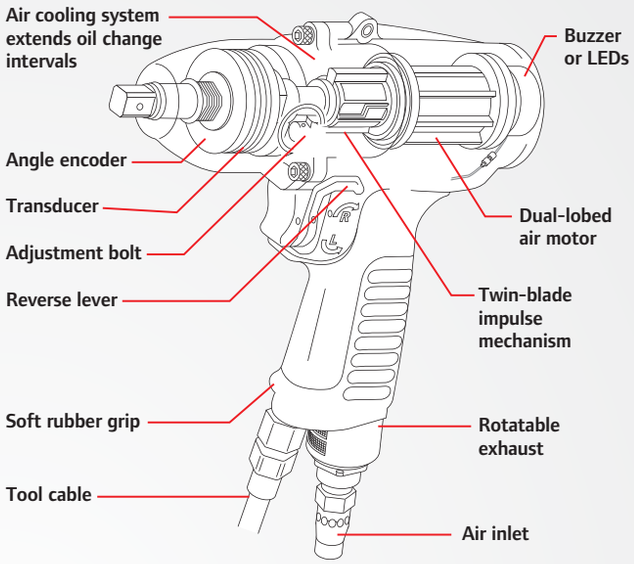
Model	Fastener Size	ft-lbs (Nm)	1 min. rpm	lbs (kg)	in (mm)	in (mm)	in	cmf
PISTOL								
100PQ1	M4 - M5	5.5 - 8 (7.5 - 11)	9300	1.6 (0.7)	5.6 (142)	0.7 (18)	1/4″	12
Q60P3	M6	10 - 16 (13 - 22)	4000	1.8 (0.8)	5.1 (130)	0.9 (22)	3/8″	11
Q60PQ1	M6	8 - 15 (11 - 20)	4000	1.8 (0.8)	5.1 (130)	0.9 (22)	1/4″	11
Q70P3	M6 - M8	18 - 25 (24 - 35)	7000	1.8 (0.8)	5.2 (131)	0.9 (22)	3/8″	11
Q70PQ1	M6 - M8	15 - 20 (20 - 28)	7000	1.8 (0.8)	5.2 (131)	0.9 (22)	1/4″	12
Q80PQ1	M8	18 - 25 (24 - 35)	7000	1.9 (0.9)	5.4 (138)	0.9 (22)	1/4″	12
Q80P3	M8	24 - 37 (34 - 50)	7000	1.9 (0.9)	5.4 (138)	0.9 (22)	3/8″	12
Q90P3	M8 - M10	35 - 48 (47 - 65)	6500	2.1 (1.0)	5.8 (148)	0.9 (23)	3/8″	14
Q110P4	M10 - M12	44 - 70 (60 - 95)	5500	3.0 (1.4)	6.5 (164)	1.1 (27)	1/2″	20
Q120P4	M12	70 - 95 (95 - 130)	6600	3.7 (1.7)	6.9 (175)	1.3 (29)	1/2″	20
Q140P4	M14	95 - 118 (130 - 160)	5400	4.9 (2.2)	7.5 (190)	1.3 (33)	1/2″	30
140P6	M16	118 - 199 (160 - 270)	3200	6.8 (3.1)	8.9 (226)	1.4 (36)	3/4″	26
3000P	M16 - M18	170 - 258 (230 - 350)	4700	10.1 (4.6)	9.7 (246)	1.6 (40)	3/4″	10
INLINE								
180SQ1	M4 - M6	11 - 18 (15 - 24)	9000	20 (0.9)	8.7 (221)	0.9 (22)	1/4″	9
280SQ1	M6 - M8	15 - 23 (20 - 31)	8000	21 (10)	9.0 (229)	0.9 (22)	1/4″	11
380SQ1	M8	21 - 30 (29 - 40)	8500	26 (1.2)	9.1 (231)	1.0 (25)	1/4″	11
ANGLE								
500A	M6 - M8	21 - 29 (29 - 39)	7000	3.3 (1.5)	10.5 (267)	1.1 (27)	3/8″	11

Model			Ø
Q60 - Q80	71 - 75 dBa	1/4″ NPT	3/8″ (10 mm)
Q790P - Q140	78 - 83 dBa	1/4″ NPT	3/8″ (10 mm)
100 - 3000	76 – 83 dBa	1/4″ NPT	3/8″ (10 mm)

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 closed-loop 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.
- Angle monitoring available
- Torque readout.
- End-of-run data.
- Operator visual and audible notification.
- I/O signals for line control.
- Simple programming for fast and easy set-up.



The new QXP Series pulse tools offer a new level of speed, convenience, accessibility, and comfort to the assembly process.

Model		ft-lbs (Nm)	1 min. rpm	lbs (kg)	in (mm)	in (mm)	in	cmf
PISTOL								
QXP60P6	M6	7.4 – 14.5 (10 – 19.5)	6,000	2.8 (1.26)	7.0 (179)	0.8 (21)	3/8″	9.5
QXP60Q4	M6	6.3 –11.8 (8 – 16)	6,000	2.8 (1.26)	7.0 (179)	0.8 (21)	1/4″	9.5
QXP70P6	M6 – M8	13 – 24 (18 – 33)	7,000	2.8 (1.26)	7.0 (179)	0.8 (21)	3/8″	11.3
QXP70Q4	M6 – M8	11 – 20 (15 – 27)	7,000	2.8 (1.26)	7.0 (179)	0.8 (21)	1/4″	11.3
QXP80P6	M8	17 – 33 (24 – 46)	7,000	3 (1.3)	7.3 (186)	0.8 (21)	3/8″	11.3
QXP90P6	M8 – M10	26 – 44 (35 – 60)	6,500	3.3 (1.5)	7.7 (195)	0.9 (23)	3/8″	14.5
QXP110P8	M10 – M12	35 – 70 (48 – 95)	5,500	4.1 (1.86)	8.2 (209)	1.0 (25.6)	1/2″	18.7
QXP120P8	M12	48 – 92 (65 – 125)	5,900	5.4 (2.46)	8.8 (223)	1.1 (29.0)	1/2″	21.2
QXP140P8	M14	55 – 114 (75 – 155)	5,200	6.3 (2.86)	9.3 (235)	1.1 (29.0)	1/2″	27.7
QXP150P8	M16	81 – 162 (110 – 220)	4,200	7.5 (3.41)	9.6 (241)	1.3 (32.5)	1/2″	27.9

Model			
QXP60 - QXP150	75 - 87 dba	1/4″ NPT	3/8″ (10 mm)

Pulse Systems

We offer a robust portfolio of pulse tools that deliver consistent performance and accuracy. Select the best solution for your application.

Pulse Systems			
FEATURES	**Standard Pulse Tools**		**Transducerized Pulse Tools**
	Non shut-off	**Shut-off**	
Fastening Strategies			✓
Angle Monitoring			✓
Torque Traceability			✓
Closed-Loop Torque Control			✓
Visible OK / Not OK Signaling			✓
Process Control			✓
Batch & Cycle Counting			✓
Operator Error Proofing		✓	✓
Lube Free Air Motors	✓	✓	✓
Easy Torque Adjustment	✓	✓	✓
High Speed, Compact, Lightweight	✓	✓	✓
Reactionless One-Handed Operation	✓	✓	✓

Accessories

Impact Sockets - 6 pt Hex

Type		No. of Models	Output Range in (mm)
IMPACT SOCKETS - INDIVIDUALS			
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)

We offer many additional sizes in sockets. Visit www.ingersollrandprocducts.com for a complete offering.

Impact Sockets

Spring Balancers

Model	No. of Models	SWL lb (kg)	ft (m)	lb (kg)
BALANCERS (SEE LITERATURE LISTED BELOW FOR DETAILS)				
BHR Series*	3	0.875 – 5.5 (0.39 – 2.5)	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.

Spring Balancer

Ingersoll Rand (NYSE:IR) advances the quality of life by creating and sustaining safe, comfortable and efficient environments. Our people and our family of brands—including Club Car®, Ingersoll Rand®, Thermo King® and Trane® —work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; secure homes and commercial properties; and increase industrial productivity and efficiency. Ingersoll Rand products range from complete compressed air systems, tools and material and fluid handling systems. The diverse and innovative products, services and solutions enhance our customers' energy efficiency, productivity and operations. Ingersoll Rand is a $12 billion global business committed to a world of sustainable progress and enduring results. For more information, visit ingersollrand.com or ingersollrandproducts.com.

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