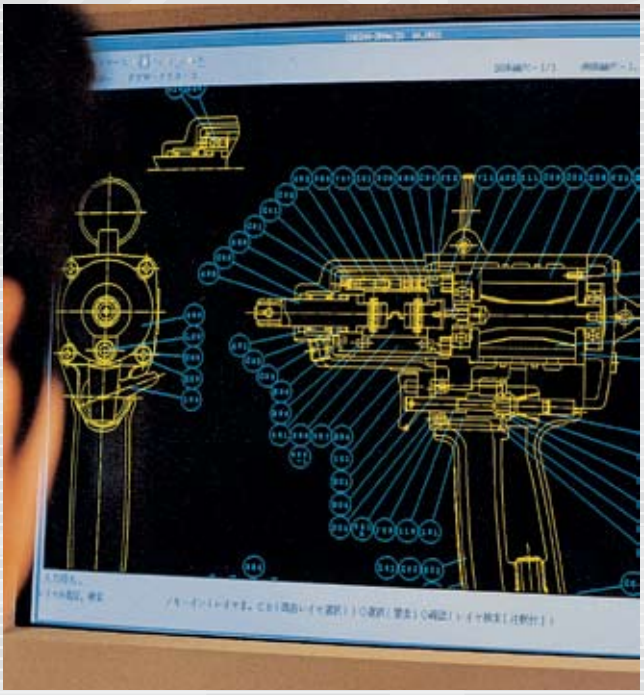
Fuji Air Tools

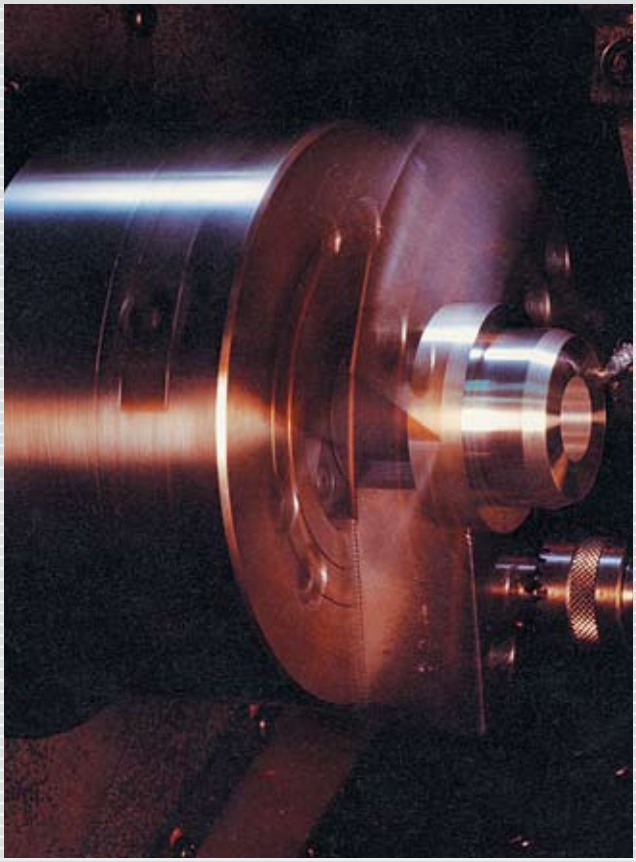
BEST OF THE BEST

Fuji, with Utmost Passion for ECO-QUALITY

UNIQUE ENGINEERING POWER SUPPORTS PRODUCTION OF HIGH QUALITY PRODUCTS.

We believe "Quality is a perpetual and absolute factor" in order to develop and deliver quality products. All products are subject to our strict design and development criteria and the production control system throughout the manufacturing process, from the selection of material to the final inspection of the finished products prior to shipment. We also believe that the superb reputation and reliance among customers on Fuji products are delivered from the non-compromising attitude towards the quality we provide. We are completely sure that we will be able to keep offering continued customer satisfaction with our unchanging attitude in toward the quality of our products.



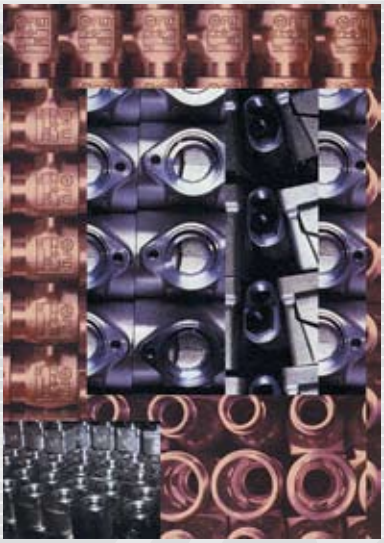


FUJI'S STRICT PRODUCTION CONTROL SYSTEM CAN MEET A WIDE VARIETY OF CUSTOMERS' DEMANDS.

We believe it is an important policy to "ensure satisfaction of our customers demands". We have successfully established strict quality control systems in all processes from the design and development through the machining and assembly. In this way we are able to maintain the typical production system to accommodate the batch production necessary to satisfy the customer demand.
Such production systems and "know how" can only be materialized by Fuji Air Tools Co., Ltd., and allow us to manufacture over 2,000 different products (including more than 600 standard models and custom made models to suit the customer specification).

EXCELLENT HUMAN RESOURCE CREATES A POWERFUL ORGANISATION.

At Fuji Air Tools we don't just "sell products"; we pride ourselves in delivering customer satisfaction!
Our activities based on our policies include product proposal information and production process & applications consulting to ensure that you can purchace our products with total satisfaction. All information from our customers' is fed back to our development and production department to ensure that customer satisfaction is "built in" as standard to our new products. Thus, our basic philosophy can be summarized in the words "we supply the quality of customer satisfaction".



THE COMPLETE FOLLOW-UP SERVICE SYSTEM IS THE DEFINITION OF OUR QUALITY.

One of our unchanging policies is that "real quality exists in the complete service and maintenance system to satisfy the customers' requirements". Through comprehensive customer support including service & maintenance systems and spare parts supply systems we aim for total costomer satisfaction.

OUR FINAL GOAL IS TO PROVIDE 100% CUSTOMER SATISFACTION WHILE FULLFILLING OUR OBLIGATION OF CONTINUAL IMPROVEMENTS TO PROTECT THE ENVIRONMENT.

We at Fuji Air Tools Co., Ltd., were awarded ISO 9001 QMS certification in 1996. This has significantly improved the level of our quality assurance capabilities. Alongside this we have invested significantly in research and actions to provide human, and environment, oriented tools through the utilization of ergonomic technology to provide the work environment where issues such as noise and vibration are fully considered. Thus, our ethos is always to deliver products that are ergonomic and reliable for our customers.
An important factor of our business is the preservation of the earth's environment. To fulfill our duty we obtained ISO 14001 EMS certification in 1998. As an Earth Citizen we continually strive to provide improvements to benefit the environment.
Our ultimate goal is to attain 100% customer satisfaction, based on our philosophy "customer satisfaction is our satisfaction" by maintaining ISO 9001 QMS at a far higher level than required. With our motto "Fuji, with utmost passion for ECO-QUALITY", we make every possible effort for continuous improvement for the future of the Earth and the human being.

Your Guide to Our Catalogue

Model Names

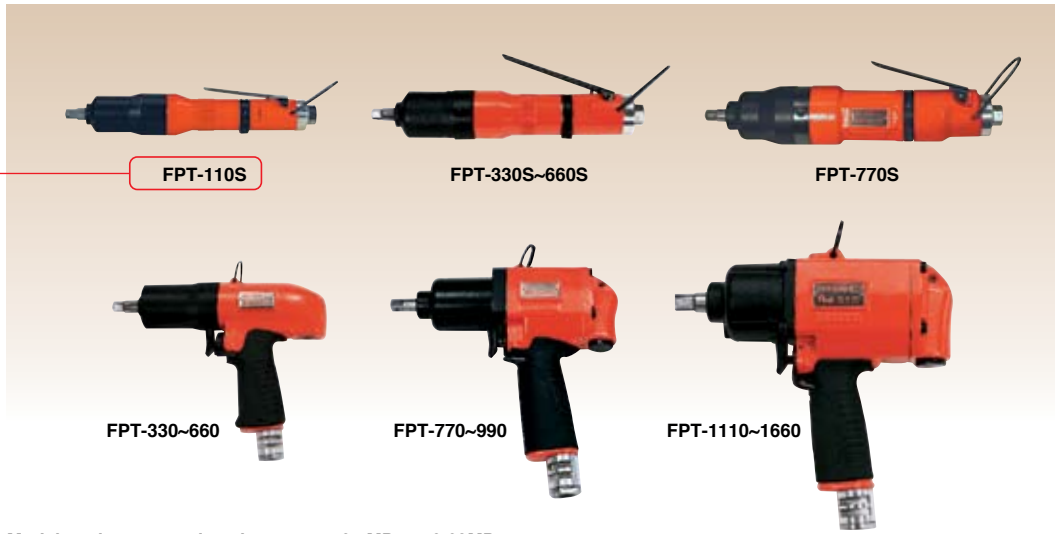
Categories

PULSE WRENCHES SHUT-OFF TYPE PAT.P

"FPT Series" are provided with Fuji patented original shut-off control mechanism having a dual chamber motor and two blade pulsing mechanism. It is designed for giving high torque at low speed, which gives the best characteristics for fast, reliable and accurate tightening. FPT series contribute to high productivity, quality improvement, working environment improvement, and operator fatigue minimization in various industries.

SQUARE DRIVE TYPE

Model Numbers



Specifications

Models to be operated at air pressure 0.5MPa to 0.63MPa

Model	Bolt Size	Recommended Torque Range			Rotational Frequency	Square Drive Size		Overall Length		Mass (without socket)		Air Consumption (at Load)	
	mm	N・m	kgf・m	ft・lb	min⁻¹	mm	in	mm	in	kg	lb	m³/min	ft³/min
Straight Models													
FPT-110S-1	M4~M5	4~7	0.4~0.7	3.0~5.2	4,500	9.5	3/8	236.5	9 5/16	0.85	1.9	0.20	7.1
FPT-330S-1	M5~M6	6~10	0.6~1.0	4.4~7.4	4,400	9.5	3/8	249	9 13/16	1.1	2.4	0.35	12.3
FPT-440S-1	M5~M6	8~13	0.8~1.3	5.9~9.6	5,000	9.5	3/8	250	9 27/32	1.1	2.4	0.35	12.3
FPT-550S-1	M6~M8	12~20	1.2~2.0	8.9~14.8	5,000	9.5	3/8	250	9 27/32	1.1	2.4	0.35	12.3
FPT-660S-1	M6~M8	20~30	2.0~3.1	14.8~22.1	5,000	9.5	3/8	262	10 21/64	1.1	2.4	0.50	17.6
FPT-770S-1	M8~M10	30~45	3.1~4.6	22.1~33.2	5,500	9.5	3/8	273.5	10 49/64	1.6	3.5	0.45	15.9
Pistol Grip Models													
FPT-110-1	M5~M6	4~7	0.4~0.7	3.0~5.2	6,000	9.5	3/8	194.5	7 21/32	0.95	2.1	0.20	7.1
FPT-330-1	M5~M6	6~11	0.6~1.1	4.4~8.1	6,000	9.5	3/8	198	7 51/64	1.2	2.6	0.39	13.8
FPT-440-1	M6	10~18	1.0~1.8	7.4~13.3	6,700	9.5	3/8	193	7 39/64	1.2	2.6	0.35	12.3
FPT-550-1	M6~M8	15~25	1.5~2.6	11.1~18.4	5,800	9.5	3/8	193	7 39/64	1.2	2.6	0.40	14.1
FPT-660-1	M6~M8	20~35	2.0~3.6	14.8~25.8	5,400	9.5	3/8	202	7 61/64	1.3	2.9	0.40	14.1
FPT-770-1	M8	30~45	3.1~4.6	22.1~33.2	6,300	9.5	3/8	200	7 7/8	1.6	3.5	0.45	15.8
FPT-880-3	M8~M10	40~60	4.1~6.1	29.5~44.3	5,800	12.7	1/2	214	8 7/16	2.0	4.4	0.50	17.6
FPT-990-1	M10	55~80	5.6~8.2	40.6~59.0	4,800	12.7	1/2	215	8 15/32	2.4	5.3	0.55	19.4
FPT-1110-1	M10~M12	75~130	7.7~13.3	55.3~95.9	4,400	12.7	1/2	216	8 1/2	2.6	5.7	0.60	21.1
FPT-1330-1	M12~M14	90~160	9.2~16.3	66.4~118.0	3,600	12.7	1/2	228	8 31/32	3.2	7.0	0.74	26.1
FPT-1660-1	M16~M18	150~210	15.3~21.4	110.6~154.9	2,800	19.0	3/4	266	10 31/64	4.4	9.7	1.2	42.4

•Use all above models at 0.5-0.63 MPa(5.0-6.3 kgf/cm²) air pressure but FPT-110 series at 0.4-0.63 MPa (4.0-6.3 kgf/cm²) air pressure.
•Performance figures are at 0.63 MPa(6.3 kgf/cm²) air pressure. •Air Inlet Thread Size: PT or NPT 1/4", (FPT-1660) PT or NPT 3/8".
•Air Hose Size: (FPT-110S, 330S, 440S, 550S, 110, 330, 440, 550) 6.3mm (1/4"). (660S, 770S, 660~1660) 9.5mm (3/8").

Housing, Throttle Type

Models to be operated at air pressure 0.4MPa to 0.5MPa

Model	Bolt Size	Recommended Torque Range			Rotational Frequency	Square Drive Size		Overall Length		Mass (without socket)		Air Consumption (at Load)	
	mm	N・m	kgf・m	ft・lb	min⁻¹	mm	in	mm	in	kg	lb	m³/min	ft³/min
Pistol Grip Models													
FPT-440-1L	M6	10~15	1.0~1.5	7.4~11.1	5,400	9.5	3/8	193	7 39/64	1.2	2.6	0.19	6.7
FPT-550-1L	M6~M8	12~20	1.2~2.0	8.9~14.8	4,900	9.5	3/8	193	7 39/64	1.2	2.6	0.20	7.0
FPT-660-1L	M6~M8	13~28	1.3~2.9	9.6~20.7	4,600	9.5	3/8	202	7 61/64	1.3	2.9	0.20	7.0
FPT-770-1L	M8	28~40	2.9~4.1	20.7~29.5	5,300	9.5	3/8	200	7 7/8	1.6	3.5	0.30	10.5
FPT-880-3L	M8~M10	38~48	3.9~4.9	28.0~35.4	5,200	12.7	1/2	214	8 7/16	2.0	4.4	0.30	10.5
FPT-990-1L	M10	40~60	4.1~6.1	29.5~44.3	4,200	12.7	1/2	215	8 15/32	2.4	5.3	0.33	11.6
FPT-1110-1L	M10~M12	65~100	6.6~10.2	47.9~73.8	3,800	12.7	1/2	216	8 1/2	2.6	5.7	0.37	13.0
FPT-1330-1L	M12	80~130	8.2~13.3	59.0~95.9	3,100	12.7	1/2	228	8 31/32	3.2	7.0	0.48	16.9

•Use all above models at 0.4-0.5 MPa(4.0-5.0 kgf/cm²)air pressure. •Performance figures are at 0.4 MPa(4.0 kgf/cm²)air pressure.
•Air Inlet Thread Size: PT or NPT 1/4". •Air Hose Size: (440, 550) 6.3mm (1/4"). (660~1330) 9.5mm (3/8").

About The Specifications on Our Catalo

1) Model Number
Use this model number when ordering. You will find the details of the model numbers on page 6 "How to understand Fuji model numbers".

2) Bolt Size, Capacity
Shows the capacity, which the tool can handle, as guidance for a tool selection. The bolt size of a fastening tool is a bolt size which the tool may fasten.
The capacities shown on this catalogue as drilling capacity, tapping capacity, riveting capacity, etc. show the size which the tool may handle. Be aware, that the capacity may vary depending on such conditions as the tension, joint rate, material, etc. of the work.

3) Recommended Torque Range, Max Torque
Shows recommended torque range or max torque of the model. Torque figures in the specifications must be used as guidance only, as final output depends on type and size of fastener, joint rate and air pressure etc.

4) Rotational Frequency
Rotational frequency is indicated in revolutions per minute, min^{-1} at which the tool runs at no load at the working air pressure of 0.63MPa, 6.3bar, 90psi if not otherwise specified.

5) Overall Length
Shows the longest part of the tool without accessories attached. Refer to the last part of this catalogue "Dimensions" if the details of dimensions are necessary.

6) Mass
Shows the mass of the tool without accessories.

7) Square Drive Size, Bit Shank Size
Square drive size shows the square size of the spindle or anvil of pulse wrenches and impact wrenches. Bit shank size indicates the bit shank size of the driver anvil of screw drivers.

8) Hex. Socket Size
Shows standard hexagonal size of the socket of the ratchet wrenches.

9) Air Inlet Thread Size
Female threaded PT (Pipe Threads) and NPT (National Pipe Threads) are available.

10) Air Hose Size
The air hose size indicates recommended minimum hose inside diameter which is necessary to supply enough volume of air to the tool for designed performance.

11) Air Consumption
The air consumption of the tools is stated in m^3/min, cubic meters per minute. It indicates the maximum air consumption at the working air pressure 0.63MPa, 6.3bar, 90psi if not otherwise stated.
Maximum air consumption is valid for the tool without a speed governor when the tool is running at no load.

Conversion Factors

Length	1 m	=1000 mm	=39.4 in	=3.28 ft
Diameter, Width, Depth, Height	1 in	=25.4 mm	=0.0254 m	=0.0833 ft
Thickness, Lift, Size	1 cm	=10 mm	=0.394 in	
Side to Center	1 ft	=12 in	=0.3048 m	=304.8 mm
Capacity				
Stroke				
Mass	1 kg	=1000 g	=2.20462 lb	
	1 lb	=0.45359237 kg		
Torque	1 N • m	=0.7375 ft • lb	=0.102 kgf • m	
Recommended Torque Range	1 kgf • m	=9.807 N • m	=7.233 ft • lb	
Max. Torque, Measuring Range	1 ft • lb	=1.3558 N • m	=0.138 kgf • m	
Stall Torque, Starting Torque				
Force	1 N	=0.102 kgf	=0.225 lbf	
Lifting Capacity	1 kgf	=9.807 N	=0.205 lbf	
	1 lbf	=4.448 N	=0.454 kgf	
	1kN	=1000 N	=102 kgf	
Pressure	1 Pa	=1 N/m^2		
Air Pressure	1 bar	=100 kPa	=0.1 MPa	=1.0197 kgf/cm^2
Vacuum Degree	1 MPa	=10.2kfg/cm^2	=10 bar	
	1 kPa	=0.01 bar	=0.0102 kp/cm^2	=7.5 mmHg
	1 kp/cm^2	=98.07 kPa		
Power	1 W	=0.102 kgf • m/s	=0.738 ft • lb/s	
Power Consumption	1 W	=1 J/s	=1 N • m/s	=1VA
Motor Output, Horse Power	1kgf • m/s	=9.807 W	=0.0133 PS	=7.233 ft • lb/s
	1 PS	=75 kgf • m/s	=0.7355 kW	
	1 kW	=1000 W		
Volume	1 m^3	=35.3 ft^3		
	1 m^3	=1000 ℓ	=1 kℓ	
	1 ℓ	=1000 cm^3	=0.001 m^3	
	1 ft^3	=28.3 ℓ		
Flow Rate	1 m^3/s	=60 m^3/min		
Max. Air Consumption	1 m^3/min	=35.3 ft^3/min		
Discharge Volume	1 m^3/h	=16.667ℓ/min	=0.2778ℓ/s	
Discharge Capacity	1 m^3/min	=16.667ℓ/s		
	1 ℓ/s	=2.1189 cfm		
	1 cfm	=0.4719ℓ/s		
Velocity	1 m/s	=3.28 ft/s	=3.6km/h	=60 m/min
Rope Speed, Lifting Speed	1 ft/s	=0.3048 m/s	=1.0973 km/h	
Propelling Speed	1 km/h	=0.278 m/s	=0.911 ft/s	
Rotational Frequency	1 s^{-1}	=60 rpm		
Free Speed, Pinion Speed Measuring Range	1 min^{-1}	=1 rpm	$=\frac{\text{Peripheral Speed (m/min) x 1000}}{\pi \text{ x Wheel Diameter (mm)}}$	(π =3.14)
Frequency	1 Hz	=60 bpm	=60 spm	
Blow, Stroke per minute	1 kHz	=1000 Hz		

How to understand Fuji model numbers

The model number of Fuji tools is formed by three elements of a combination of letters and numbers indicating the various properties and characteristics of the tools concerned. The first combination of letters indicates the group category that the model belongs to. "FRD" of the model FRD-6PX-3, for example, indicates that this model belongs to the group of "Fuji Rotary Drill". The second part "6PX" shows the capacity in numbers like wheel size, bolt size, horse power etc. and also shows the types of throttle handle, exhaust direction and housing etc. in letters. In this case, "6" indicates drilling capacity and "PX" indicates pistol handle and rear exhaust. The third part "3" shows the generation of models in numbers and types of handle, length of anvil and driver bit etc. in letters. In this case, "3" indicates the order of production.

Controllers, Torque Testers

FFC	Fuji Fastening Controller
FMC	Fuji Multiple Fastening Controller
FFA	Fuji Fastening Adapter
FDT	Fuji Digital Torque Tester
TT	Torque Transducer
FDM	Fuji Digital Tachometer
FJT	Fuji Hydraulic Torque Tester

Grinders, Sanders

TURBO	Turbo Grinder
FG	Fuji Die Grinders or Straight Grinders
FA	Fuji Angle Grinders
FV	Fuji Vertical Grinders
FOS	Fuji Orbital Sanders
FOR	Fuji Orbital Sanders (Random)
FBS	Fuji Belt Sanders

Hammers, Chippers, Rammers

FCH	Fuji Chipping Hammers
FC	Fuji Calking Hammers
FRH	Fuji Riveting Hammers
FR	Fuji Rammers
FS	Fuji Scaling Hammers
FNS	Fuji Needle Scalers

Wrenches, Drivers

FET	Fuji Electronic Torque Control Pulse Wrenches
FPT	Fuji Mechanical Shut-off Pulse Wrenches
FPW	Fuji Pulse Wrenches
FD	Fuji Screw Drivers
FW	Fuji Impact Wrenches
CA	Corner Attachments for Impact Wrenches
FRW	Fuji Ratchet Wrenches
FOW	Fuji Open Ratchet Wrenches

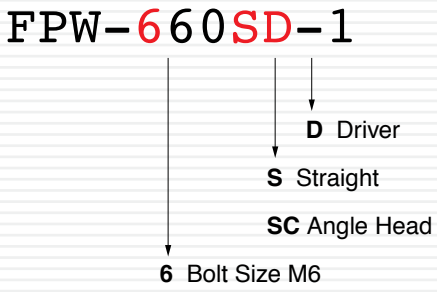
Drills, Tappers

FRD	Fuji Rotary Drills
FCD	Fuji Corner Drills
FT	Fuji Tappers

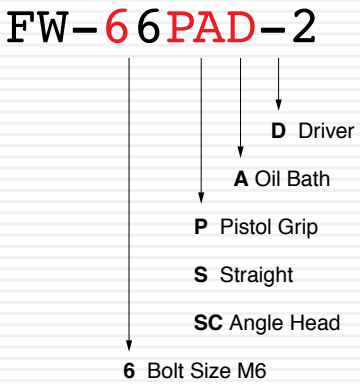
Other products

FRF	Fuji Reciprocating File & Saw
FP	Fuji Pumps
FJP	Fuji Jet Pumps
FBM	Fuji Pipe Bevelling Machines
FM	Fuji Air Motor
FTD	Fuji Tip Dressers

PULSE WRENCHES



IMPACT WRENCHES



RATCHET WRENCH

F RW-8NX-2A

- **A** Thin Socket
- **X** Rear Exhaust
- **8** Bolt Size M8

DIE GRINDERS

FG-26X-10F

- **F** Locking Lever Handle
- **N** Locking Roll Handle
- **X** Rear Exhaust
- **L** Extended Model
- **Y** Extra-Extended Model
- **D** Double bearings
- **26** Diameter of Mounted Wheel 26mm

STRAIGHT, EXTENDED GRINDERS

FG-3HL-1F

- **F** Locking Lever Handle
- **N** Locking Roll Handle
- **M** Locking Lever Handle
- **C** D grip Handle
- **X** Rear Exhaust
- **L** Extended Model
- **Y** Extra-Extended Model
- **P** Pistol Grip
- **V** Dual Chamber Motor
- **3** Diameter of Straight Wheel 3 inches

ORBITAL SANDERS

FOR-125BF-E

- **E** Adhesive Type
- **M** Velcro type
- **B** Lever
- **T** Cock
- **BF** Locking Lever
- **125** Pad Size 125 mm

VERTICAL GRINDERS

F V-9BH-1M

- **M** Locking Lever Handle
- **H** Heavy Duty
- **B** series
- **9** Diameter of Center Depressed Grinding Wheel 9 inches

ANGLE GRINDERS, SANDERS

F A-4CHK-3F

- **F** Locking Lever Handle
- **M** Locking Lever Handle
- **H** Heavy Duty
- **K** 110˚-120˚Angle Head
- **C** series
- **4** Diameter of Center Depressed Grinding Wheel 4 inches

DRILLS

FRD-16Z-1C

- **C** Inside Lever handle
- **P** Pistol Grip
- **S** Straight
- **X** Rear Exhaust
- **Z** D Grip
- **16** Drilling Capacity 16mm

TAPPERS

F T-6BX-1

- **X** Rear Exhaust
- **Z** D Grip
- **P** Pistol Grip
- **B** Twin-lever
- **6** Tapping Capacity 6mm

CALKING HAMMERS

FC-2Z-1

- **1,H,3** Hex Chisel Shank
- **2,R,4** Round Chisel Shank
- **2** Stroke 2 inches

RAMMERS

FR-22L-2F

- **F** Locking Lever Handle
- **L** Floor type
- **B** Bench type
- **22** Piston Diameter 22 mm

PIPE BEVELLING MACHINES

FBM-80A-6

- **6** Set Number
- **80** Capacity Pipe Inside Diameter 80mm

CHIPPING HAMMERS

FCH-20F

- **F** Flux Chisel
- **20** Piston Diameter 20mm

LIGHT HAMMERS

FRH-3-1

- **1** Hex Chisel Shank
- **2** Round Chisel Shank
- **3** Riveting Capacity 3 mm

PUMPS

FP-20-1

- **20** Discharge Head 20m

AIR MOTORS

F -6SM-5R

- **R** Reversible
- **5** Rotational Frequency 500 min^{-1}
- **S** Straight
- **6** Motor Size

FM-2R-5

- **5** Rotational Frequency 500 min^{-1}
- **R** Reversible
- **2** Horse Power 2 P.S.

SELECTION GUIDE

TORQUE CONTROL SYSTEM

To accommodate the various requirements of torque control and assembly application, Fuji offers a complete range of fastening tools and reliable torque controllers designed to enhance quality and increase productivity. The following table shows various combinations of fastening tools and controllers. Choose the correct combination to meet your production requirements.

TOOLS		FW FOW FRW	FPW	FPT	FET	FW	FPW	FW	FPW	FW	FPW	FET
CONTROLLERS		-	-	-	-	FFC	FFC	FMC	FMC	FFC	FFC	-
COUNTDOWN ADAPTERS		-	-	-	-	-	-			FFA	FFA	FFA
TORQUE ADJUSTMENT			●	●	●	●	●	●	●	●	●	●
SHUT-OFF				●	●	●	●	●	●	●	●	●
PRINT OUT	FASTENING NG/GOOD				○	○	○	●	●	○	○	○
	FASTENING TORQUE				○							○
LINE INPUT						●	●	●	●	●	●	●
LINE OUTPUT	FASTENING NG/GOOD				●	●	●	●	●	●	●	●
	FOOL PROOF NG/GOOD							●	●	●	●	●
	FASTENING TORQUE				●							●
DATA MEMORY					●							●
PC NETWORK					○	○	○	○	○	○	○	○

* ○ available with optional accessories FFC: FFC-3-1 FFA: FFA-2-2/FFA-3-1

TIGHTENING TORQUE (N·m)

This table shows the recommended tightening torque for common bolt size M2 to M48.

Bolt Size	Bolt Grade							Bolt Size	Bolt Grade					
mm	3.0	4.6	4.8	5.8	8.8	10.9	12.9	mm	4.6	4.8	5.8	8.8	10.9	12.9
M2	0.10	0.13	0.17	0.22	0.35	0.49	0.58	M18	103	121	172	275	386	463
M3	0.35	0.46	0.61	0.77	1.20	1.70	2.10	M20	144	170	240	385	541	649
M4	0.81	1.10	1.40	1.80	2.90	4.00	4.90	M22	194	230	324	518	728	874
M5	0.60	2.20	2.95	3.60	5.70	8.10	9.70	M24	249	295	416	665	935	1120
M6	2.80	3.70	4.90	6.10	9.80	14.0	17.0	M27	360	435	600	961	1350	1620
M8		8.9	10.5	15	24	33	40	M30	492	590	819	1310	1840	2210
M10		17	21	29	47	65	79	M36	855	1030	1420	2280	3210	3850
M12		30	36	51	81	114	136	M42	1360		2270	3640	5110	6140
M14		48	58	80	128	181	217	M45	1690		2820	4510	6340	7610
M16		74	88	123	197	277	333	M48	2040		3400	5450	7660	9190

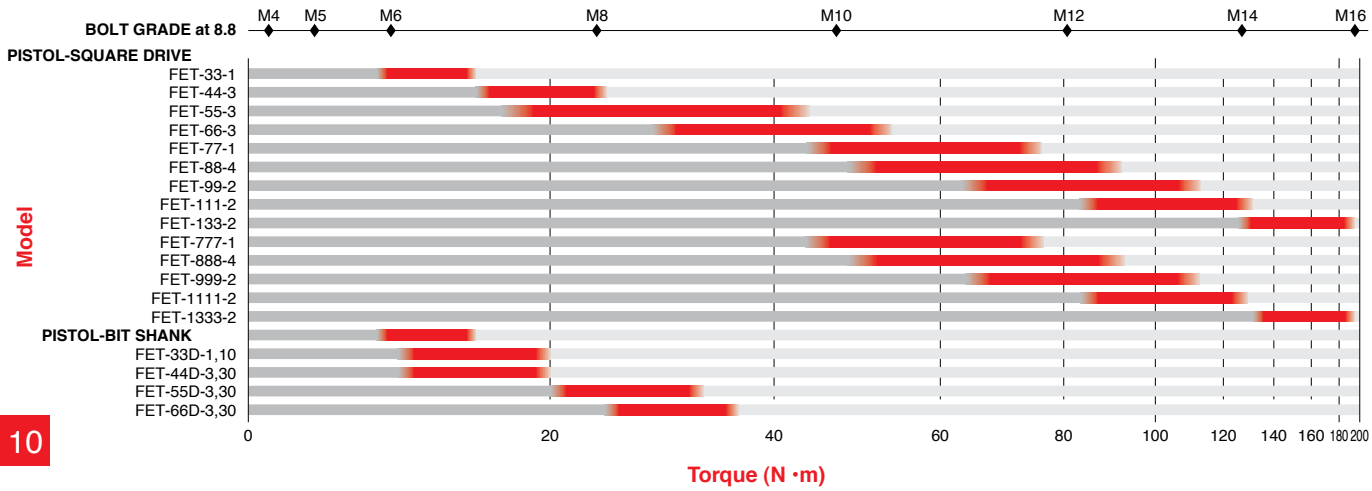
according to ISO898/1

RECOMMENDED TORQUE RANGE

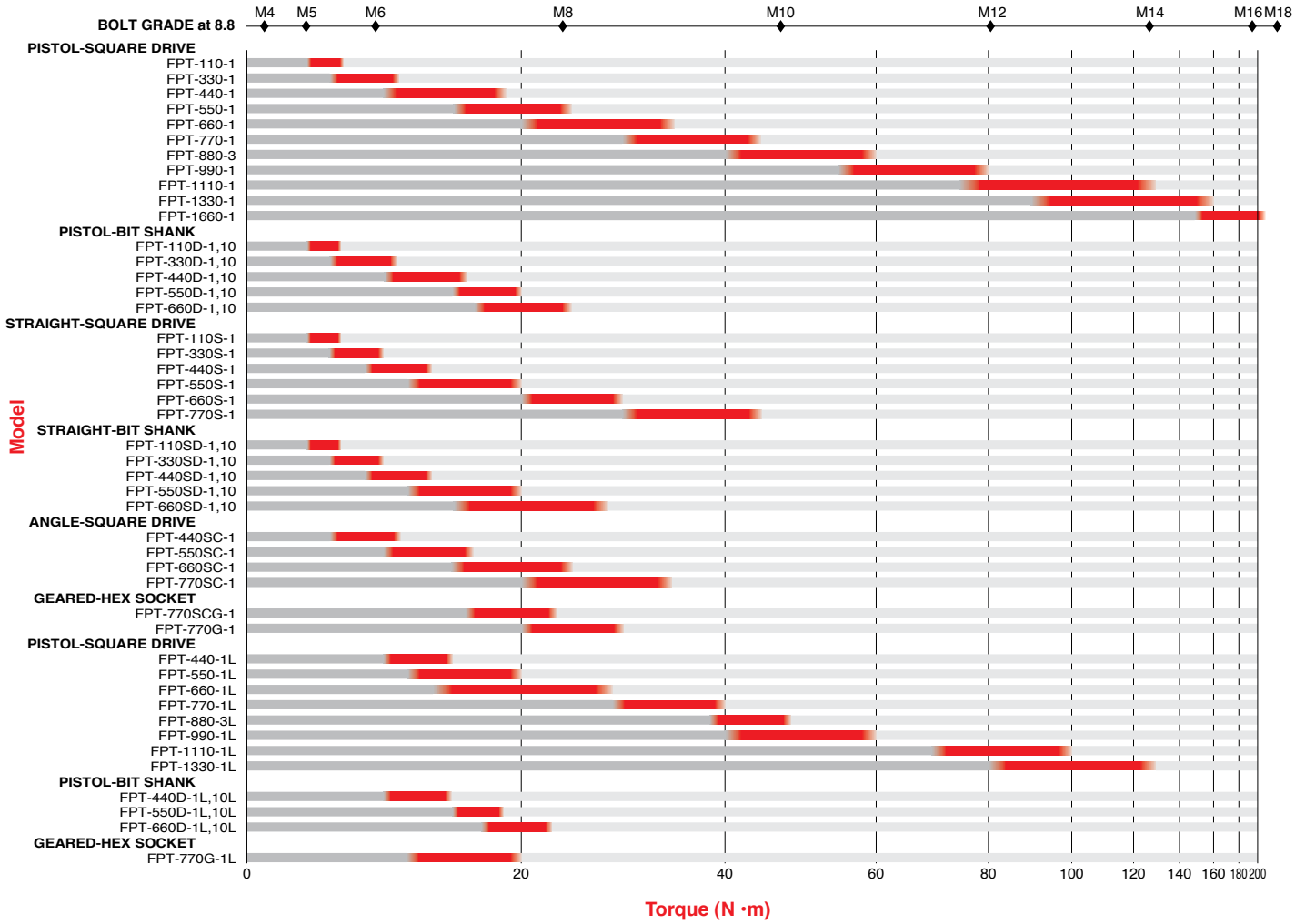
The torque requirement is one of the major factors to be considered when selecting fastening tools. The following graphic presentation shows the recommended torque range of our assembly tools. This is to be used for guidance only as final torque may vary depending in the type and size of the fastener, the joint rate, air pressure, etc.

Optimum performance is achieved at the mid range of the tool's torque capability.

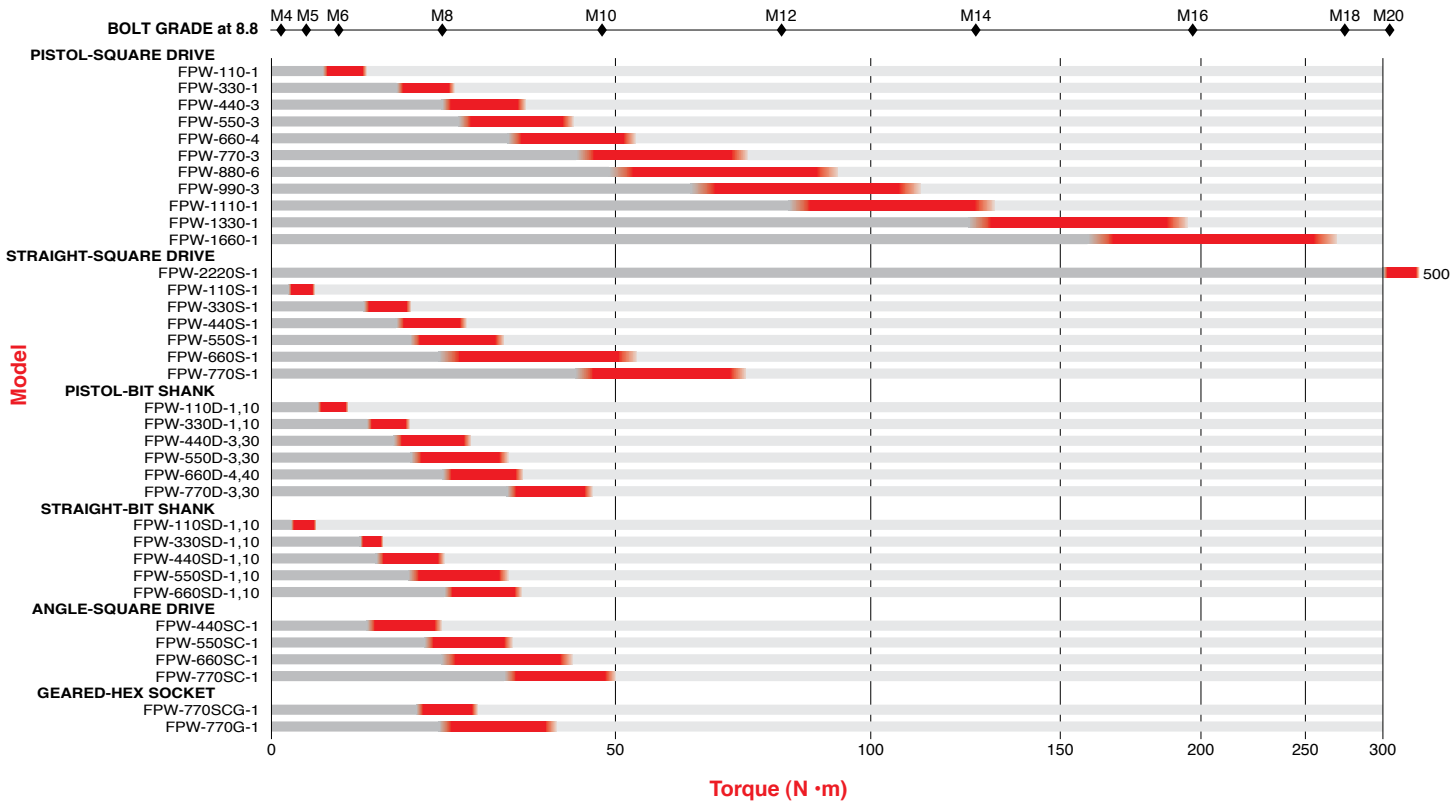
ELECTRONIC TORQUE CONTROL PULSE WRENCHES



PULSE WRENCHES SHUT-OFF TYPE

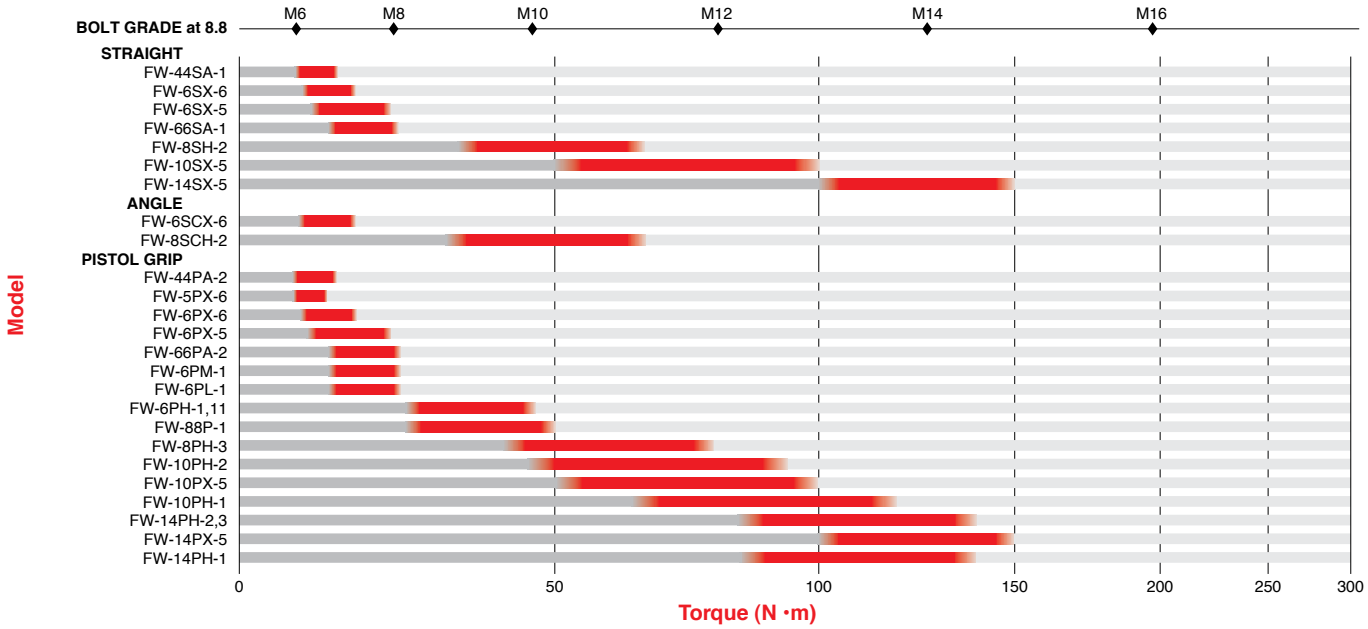


PULSE WRENCHES

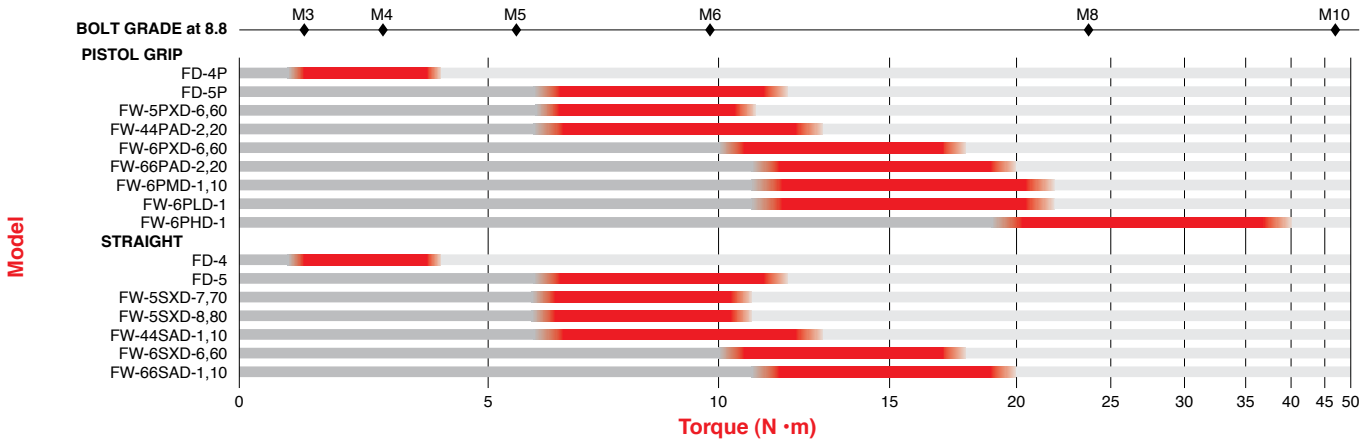


Torque range should be used for guidance only as final torque may vary depending in the type and size of fastener, the joint rate, air pressure etc.
Optimum performance is achieved at the mid range of the tool's torque capability.

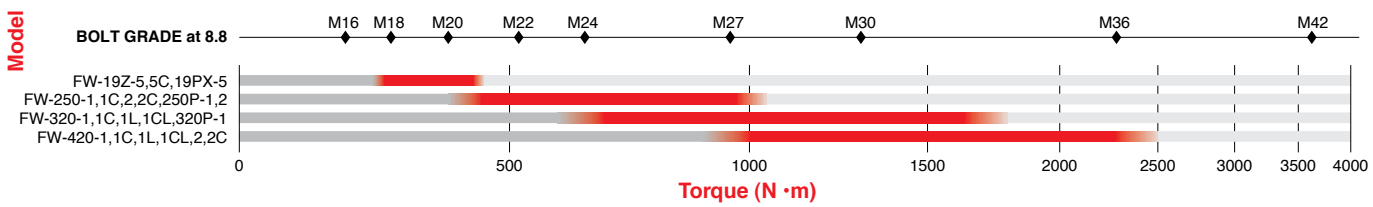
IMPACT WRENCHES



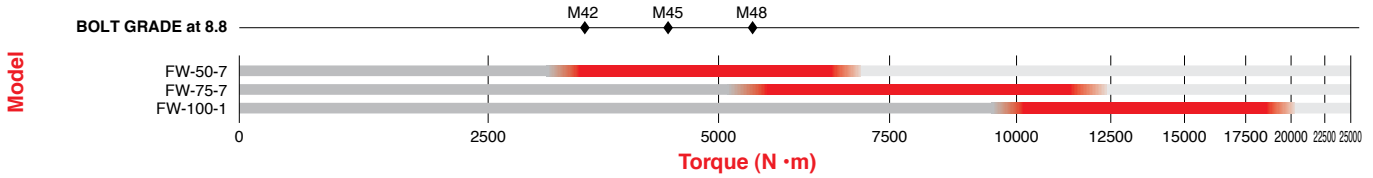
SCREW DRIVERS



IMPACT WRENCHES



LARGE IMPACT WRENCHES



Torque range should be used for guidance only as final torque may vary depending in the type and size of the fastener, the joint rate, air pressure, etc.
Optimum performance is achieved at the mid range of the tool's torque capability.