FLT Series

Torque Control Oil Pulse Wrenches

- *Low Weight*
- *Available for Operation at Low Air Pressure*
- *Plunger Mechanism provides Torque Accuracy*
- *Piston Datum Return Mechanism minimises fastening torque scatter*

FUJI AIR TOOLS CO., LTD.

Torque Control Oil Pulse Wrenches

FEATURES

1 Shutoff Valve Mechanism *(Patent pending)*

The New Shutoff Valve Mechanism (Patent pending) provides the benefit of Operation at Low Pressure.
The new design shut off valve utilises a 'total pressure' mechanism to maintain the balance of the shut off valve. The new valve design operates over a range of 0.4-0.63 MPa (4-6.3bar, 58-90psi) air pressure.
Compared to the conventional designed differential pressure valves (which require the use of a spring to maintain the balance of force against the shut off valve, and often a spring change to accommodate different air pressure levels), the 'total pressure' design provides a superior efficiency operation and improves productivity levels.

2 Plunger Mechanism *(Patent pending)*

Plunger Mechanism (Patent pending) provides the benefit of improved Torque Accuracy.
For control of low torque, the oil pressure applied to the piston is maintained at a low level and improves torque control. To ensure high accuracy control of low torque, the plunger mechanism is utilised to deliver torque accurately. Oil leakage is prevented within the mechanism via a passage in the plunger which is designed to accommodate changes in oil pressure when the pulse is generated. Consequently, torque and tightening accuracy stability are maintained.

3 Piston Datum Return Mechanism *(Patent pending)*

Torque control is influenced by the movement of the piston as oil pressure changes during pulse generation.The operation of the shut off valve ensures the mechanism for returning the piston to datum position is activated after detecting the change in oil pressure.
The next tightening operation can be applied quickly and fastening torque scatter is improved due to this behaviour of the piston.

4 Accumulator Mechanism

The Accumulator functions to compensate against the sudden rise of oil pressure when tightening a hard joint. Torque scatter and error is minimised.
As the oil temperature increases during consecutive tightening, the accumulator takes in the expanded volume of oil to maintain a consistent oil volume in the pulse unit. This ensures high tightening torque accuracy.

5 Environmentally Friendly Design

To reduce effects on the environment and environmental energy during the life cycle of the tool, no paint is applied to the body of the tool. Consequently, the effect of paint peeling is eliminated. The full cover protector is designed as standard.

6 Ergonomic Design

Compared with conventional tools, weight is kept to a minimum. The grip handle size is optimised to provide enhanced levels of operator comfort. This special grip also absorbs vibration more effectively.
Furthermore, reduced noise and vibration levels are standard with the FLT series due to the optimised dimensions.

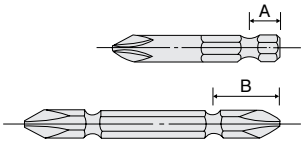
FLT Series

Square Drive Type

Model	Capacity (Bolt Size)	Recommended Torque Range			Rotational Frequency (At no Load)	Square Drive Size	Overall Length		Mass		Air Consumption (At Load)		Distance Center To Side	Air Inlet Thread	Air Hose Size	
		0.63MPa			0.63MPa						0.63MPa					
	mm	N.m	kgf.m	ft.lb	min^{-1}	mm	mm	in	kg	lb	m^3/min	ft^3/min	mm	PT or NPT	mm	in
FLT-4-1	M5~M6	5~12	0.5~1.2	3.6~8.8	6200	9.5	181	7 1/8	0.97	2.1	0.40	14.1	22	1/4	6.3	1/4
FLT-5-1	M6~M8	11~24	1.1~2.4	8.1~17.7	6500	9.5	181	7 1/8	0.97	2.1	0.45	15.8	22	1/4	6.3	1/4
FLT-6-1	M8~M10	22~35	2.2~3.5	16.2~25.8	6300	9.5	193	7 19/32	1.00	2.2	0.55	19.4	22	1/4	9.5	3/8
FLT-7-1	M8~M10	30~60	3.0~6.1	22.1~44.2	6100	9.5	189.5	7 29/64	1.10	2.4	0.60	21.1	24	1/4	9.5	3/8
FLT-9-1	M10	50~85	5.1~8.6	36.8~62.6	5300	12.7	209	8 15/64	1.60	3.5	0.68	24.0	27	1/4	9.5	3/8
FLT-11-1	M10~M12	70~130	7.1~13.2	51.6~95.8	5000	12.7	217.5	8 9/16	1.85	4.1	0.80	28.2	29.5	1/4	9.5	3/8
FLT-13-1	M12~M14	90~160	9.1~16.3	66.3~118	3400	12.7	227.5	8 61/64	2.10	4.6	0.85	30.0	32	1/4	9.5	3/8
FLT-20S-1	M18~M20	200~400	20.4~40.8	147.5~295	2500	19.0	405	15 3/32	8.80	19.4	1.30	45.8	45	1/2	12.7	1/2

Bit Shank Type

Model	Capacity (Bolt Size)	Recommended Torque Range			Rotational Frequency (At no Load)	Bit Shank Size	Overall Length		Mass		Air Consumption (At Load)		Distance Center To Side	Air Inlet Thread	Air Hose Size	
		0.63MPa			0.63MPa						0.63MPa					
	mm	N.m	kgf.m	ft.lb	min^{-1}	mm	mm	in	kg	lb	m^3/min	ft^3/min	mm	PT or NPT	mm	in
FLT-4D-1	M5~M6	5~12	0.5~1.2	3.6~8.8	6200	6.35	181	7 1/8	0.97	2.1	0.40	14.1	22	1/4	6.3	1/4
FLT-4D-10	M5~M6	5~12	0.5~1.2	3.6~8.8	6200	6.35	181	7 1/8	0.97	2.1	0.40	14.1	22	1/4	6.3	1/4
FLT-5D-1	M6~M8	11~22	1.1~2.2	8.1~16.2	6500	6.35	181	7 1/8	0.97	2.1	0.45	15.8	22	1/4	6.3	1/4
FLT-5D-10	M6~M8	11~22	1.1~2.2	8.1~16.2	6500	6.35	181	7 1/8	0.97	2.1	0.45	15.8	22	1/4	6.3	1/4
FLT-6D-1	M8~M10	19~28	1.9~2.8	14.0~20.5	6300	6.35	193	7 19/32	1.00	2.2	0.55	19.4	22	1/4	9.5	3/8
FLT-6D-10	M8~M10	19~28	1.9~2.8	14.0~20.5	6300	6.35	193	7 19/32	1.00	2.2	0.55	19.4	22	1/4	9.5	3/8

Bit Size		FLT-∗D-1 A : 9.5mm B : 12mm FLT-∗D-10 A : 13mm B : 16mm

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