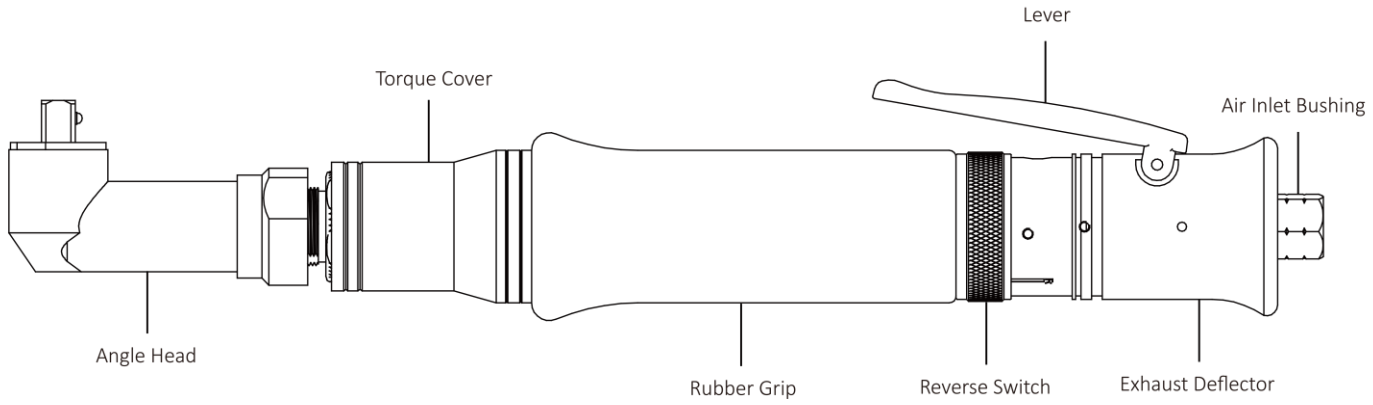
Mijy-land Industrial Co.,Ltd

A-series ABSF AIR SCREWDRIVER OPERATION MANUAL

For safety use, Please Follow the instructions. The operation without your local regulations may cause serious injury.
Read thoroughly and understand this instruction manual and keep this within reach for future reference.



Specification List

Model No.	Speed	Weight	Length	Diameter	Noise	Air Pressure	Min Air Hose Bore	Air Consumption	Square Drive	Torque Range	Fastening Capacity	
											Machine Screw	Tapping Screw
	rpm	Kg	mm	mm	±2dBA	Kg/cm²	mm	l/s	in	Nm		
A71500ABSF	700	1.6	350	34	78	6.0	8.0	9	3/8”	6-18	M6.2-M9.2	M5.0-M7.1
A72000ABSF	430	1.6	350	34	78	6.0	8.0	9	3/8”	10-25	M7.5-M10.0	M6.0-M8.0
A72500ABSF	350	1.6	350	34	78	6.0	8.0	9	3/8”	10-28	M7.5-M10.8	M6.0-M8.6
A73000ABSF	250	2.5	400	42	82	6.0	8.0	11	1/2”	10-40	M7.5-M11.8	M6.0-M9.4
A74000ABSF	180	2.5	400	42	82	6.0	10.0	11	1/2”	35-60	M11.5-M13.2	M9.0-M10.8
A74500ABSF	130	2.6	400	42	82	6.0	10.0	11	1/2”	35-70	M11.5-M14.0	M9.0-M11.2
A75000ABSF	100	3.0	420	42	81	6.0	13.0	12	1/2”	40-120	M11.8-M16.8	M9.4-M13.3

Function Instruction

1、Torque cover

To prevent improper torque adjustment by operator, this up-to-the-date design fixes torque at same standard. Further, for this special structure design, the torque cover is necessary for tool during operation. Due to the safety consideration and to prevent the tool be broken by any impacting, please operate tool as per this instruction manual and note it is prohibitive to operate tool without torque cover.

2、Air inlet

Main air pressure source and oil injection hole for daily maintenance. Use the original 1/4" pipe connection be matched with various specifications (PT19, NPT18, PS19). Before assembly, please pay attention that there is no foreign matter in the tube. ★Do not use pipe joints that are not provided with the tool because different pipe joints will cause parts damage (slip teeth) and air leakage after the intake nut is over-tightened.

3、Trigger

Designed with a composite structure consisting of an internal iron plate covered with heat-resistant plastic. Pressing the trigger immediately activates the pneumatic tool. When the fastener is tightened to the preset torque, the tool will stop operating at once. At this point, releasing the trigger will reset it.

4、Valve reverse switch

With this friendly valve reverse switch design, operator can change the motor rotation direction rapidly by adjusting only the valve reverse switch.

Operations

1、 Before using a new tool, use a high pressure of 6 kg to spray off the excess oil inside and then lock it. Otherwise, the motor may not run smoothly when working at low pressure.

2、 Please first ensure the socket is securely seated in the correct position.

3、 When the lever is pressed, the motor starts to rotate, increasing torque precision and ensuring work safety. When the lever is released, the tool immediately stops operating. For safety reasons, please make sure to hold the tool securely throughout the entire operation process.

4、 Smooth change of valve reverse (right/left) button turn direction can be done.

5、 When the load reaches the preset torque value, the clutch will trip and the motor will automatically stop.

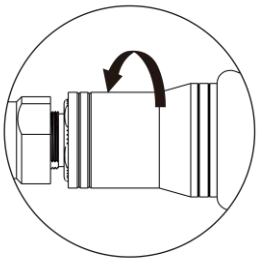
6、 The four-color ring is used to manage and identify the torque of the screwdriver.

7、Torque Adjustment

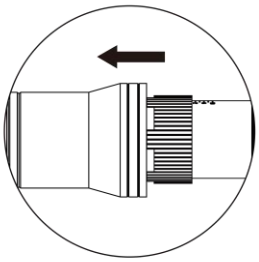
It is easy to adjust the torque of large (tight) and small (loose). Turn the torque adjustment ring to the right to tighten and the torque will increase. Turn the adjustment ring to the left to loosen and the torque will decrease.

★Since the tool has relatively high torque, for safety reasons, please secure the tool in a vise. **Warning: Improper operation may cause damage to the tool.**

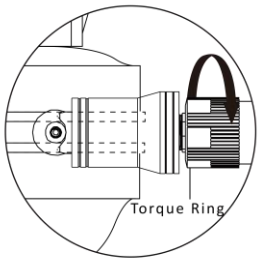
7-1. A71500~72500ABSF models – Standard Torque Adjustment



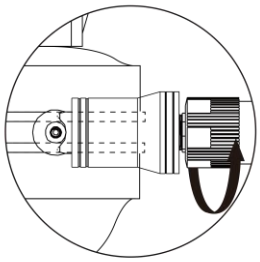
Release torque cover



Drop torque cover out

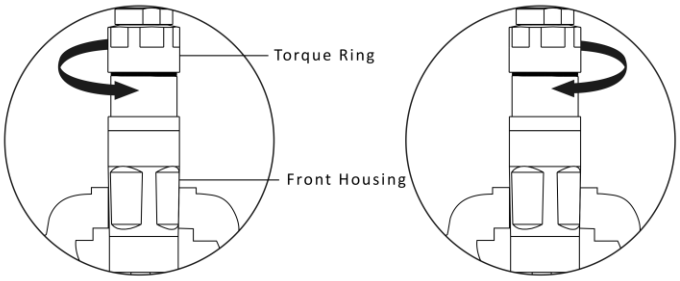


Secure the square drive with a vise. Use the wrench to tighten to the right: increase torque



Secure the square drive with a vise. Use the wrench to loosen to the left: decrease torque

7-2. A73000~75000ABSF models – Standard Torque Adjustment



Secure the front housing of the tool in a vise. Use the wrench to tighten to the right: increase torque

Secure the front housing of the tool in a vise. Use the wrench to loosen to the left: decrease torque

Air supply conditions and precautions

1、When the air compressor contains too much water vapor and dust, it will cause adverse effects on pneumatic tools. Therefore, the air pressure pipe must be equipped with a water vapor filter and an automatic supply of lubricating oil to filter unwelcome substances, and every Drain the water from the drainage channel on a daily basis.

2、It is generally recommended that the main air pipe pressure be maintained at 7 kg/cm2 to 9 kg/cm2. A pressure regulator must be installed before connecting the air pressure pipe of the pneumatic screwdriver. The air pressure pipe pressure should be stabilized at 5.0kg/cm² (71psi) or 6kg/ cm² (85psi), the inner diameter of the pneumatic pipe should be selected as recommended in the specification list above. For most screwing operations, the air pressure of 5.0kg/cm² is sufficient for the air pressure tube. However, to obtain the maximum torque value of the tool, please use the air pressure of 6.0kg/cm². Do not use more than the specified air pressure, otherwise the life of the pneumatic screwdriver will be shortened, which is very important and necessary for pneumatic tools.

3、Before installing the pneumatic screwdriver, please connect the air inlet pipe joint to the air inlet nut.

4、Please keep the pipelines clean to prevent moisture and dust from accumulating in the pneumatic pipelines and quick connectors. Otherwise, long-term use will cause the inner diameter of the pipelines to become smaller.

5、When the pneumatic screwdriver and the pneumatic tube are separated, do not let the pneumatic tube quick connector drop to the floor. This will accumulate dust or unwelcome substances and enter the pneumatic tube, causing damage to the tool.

6、The device pressure regulator can stabilize the air pressure pipeline pressure and ensure the accuracy of the pneumatic screwdriver torque (repeatability).

7、Oil-free air tools require an air dryer to filter moisture.

Maintenance

1、Before the air screwdriver is not used for a long time, it must be lubricated and stored, otherwise the air screwdriver will be rusted and damaged. Get used to lubricating and saving before going to get off work.

2、Before using the manual refueling pot to lubricate, first disconnect the pneumatic screwdriver and the air pressure tube, then add lubricating oil Mobil-1 (#30-#60) into the air intake nut, connect the pneumatic screwdriver and the air pressure tube, and start the tool to idle for about two seconds. Lubrication and storage can be completed in seconds, and 1-2 times a day can extend tool life.

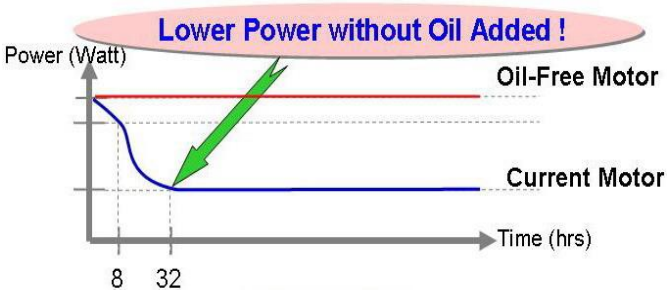
3、The oiling cycle is about seven days (168 hours). Recommend to use M&L spindle oil cooler(CP-OIL01).。

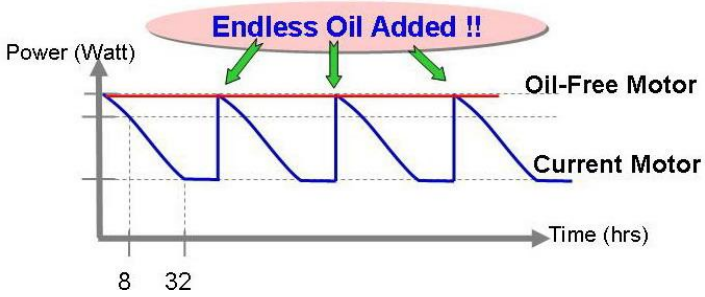
Tool Advantage

1、High quality Oil-free Motor

High quality Oil-free Motor is our new design used on high technologic tool. At the beginning operation, the power of Oil-free motor keeps stable at it's top capability without any oil injection, but the power of Current motor decreases till it's lowest capability after 32 hours operating unless oil adding. The high technologic Oil-free motor increases 60% torque and keeps noise as standard 74/78dB which prevents operator and environment from noise damaging and accords with industrial classified tool standard.

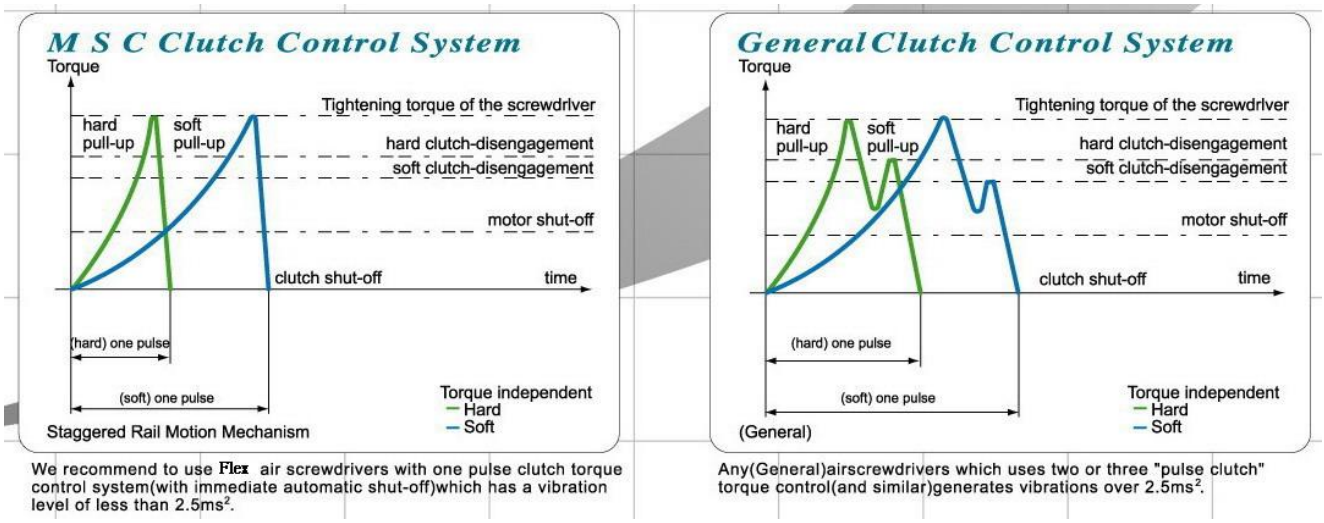
(Please refer to the below table about Oil-free and current motor.)





2、CPK value＞1.33

With 3rd generation patented cross-path MSC clutch and special mechanical structure, this air screwdriver accords with ISO5393 B class CPK value Torque deviation request (CPK value＞1.33). This patented one pulse clutch system has also the merits of low vibration(less than 2.5ms), low torque deviation(±3%) and wide torque range.



We recommend to use Flex air screwdrivers with one pulse clutch torque control system(with immediate automatic shut-off)which has a vibration level of less than 2.5ms².

Any(General)airscrewdrivers which uses two or three "pulse clutch" torque control(and similar)generates vibrations over 2.5ms².

3、Torque fix and torque management system

The outside torque adjustment design let user either adjust the torque rapidly or without using the torque lock nut. To avoid the adjustment by operator, this up-to-the date torque cover design prevent user to change the torque at will.

Using cautions

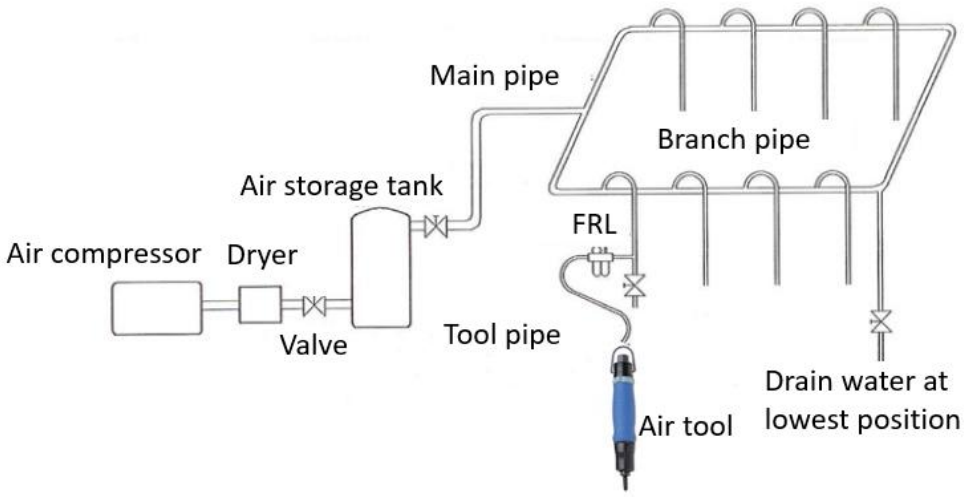
1、 Due to the safety consideration, please make sure tool is completely under control before and during operation.

2、 Changing the rotation direction at will without stopping first the operation may damage the motor or reduce the usage term. Please note it is prohibited to change the rotation direction during operation, the proper operating method is stop first the operation, then change the rotation direction by pushing the Valve reverse switch.

3、 The air screwdriver can be damaged by accidental falls or impacts. Due to the safety consideration, please hold the tool carefully or use the hook to prevent the tool dropping down.

4、 Any moisture or lubrication injection may damage the air screwdriver, please keep tool dry and avoid oil based substances exposing to the products. For avoiding moisture affection, using Air Dryer is necessary in wet area or under moist weather.

Air Compressor System Schematic Diagram



Air Compressor

The air source of the air storage tank, the air pipeline, and the air source used by the tools are all provided by the air compressor. The air compressors are divided into 4 major types: screw air compressors, centrifugal air compressors, turbo air compressors and piston air compressors. Piston air compressors are divided into one stage and two stages according to the pressure range. The first stage is used in the workplace where the final pressure is about 10 kg/cm^2, and the final pressure of the second stages is about 17 kg/cm^2. In the pneumatic tool industry, the second stage belong to high pressure air compressor which usually used to assemble car tires or air picks for road repairs.

Dryer

The dryer plays the role of filtering water. When the air is compressed by the air compressor, the air will be higher than the temperature of the outside atmosphere, and the instantaneous fusion of the temperature difference will cause too much water. Therefore, the air compressor is equipped with cooling and drying air system.

Valve

When there is an air leakage accident in the air circuit, the valve can close the air pressure in a certain section for maintenance. Drain the water at the lowest position of the branch pipe and the main pipe, the valve can play the role of draining water.

Air storage tank

After the air is compressed by the air compressor, it is stored in the air storage tank (air container). Since the air compressor has a difference in air consumption (after the air pressure is consumed to a certain value, the compressor starts to supply air, and when the air pressure is supplied to a certain value, the compressor stops working), the air storage tank can stabilize the working pressure and will not fluctuate or the air pressure will not fluctuate too much.

Air pipeline

The air pipe is divided into main pipe, branch pipe and tool pipe. Usually, the pressure of the air compressor should be maintained at 7 kg/cm^2 - 9 kg/cm^2, and the inner diameter is more than 1 inch. The tool pipe is in the range of 3 meters (the total length of the pipe is to be expanded in a straight line), and the pressure is adjusted by the FRL's pressure regulator or regulating valve. For setting pressure and pipe diameter, please refer to the "Air Pressure and Minimum Pipe Diameter" column in the specification list of the tool manual. If the on-site environment cannot be improved and the tool pressure is insufficient, it is recommended that the customer purchase the next model with greater torque..

FRL (Filter, Regulator, Lubricator)

The installation of FRL is of great benefit to air tools. It can not only ensure the air pressure required by the screwdriver, but also filter the water in the air in the tube and inject the lubricating oil into the motor of the air tool to prevent the internal parts of the motor from embroidering.

1. The left side is the pressure regulator, the pressure gauge shows the pressure, and the pressure can be adjusted.
2. There is a filter at the bottom of the left side to filter the water in the air.
3. The lower right side is the lubricator, which injects lubricating oil into the air in the pipeline, so that the lubricating oil is injected into the pneumatic tool through the flow of air to ensure the lubrication in the tool motor.

Note: The filter of FRL should be drained regularly, and the lubricator should always check whether the lubricating oil is sufficient, otherwise it will not be able to play the best performance.

How to determine the amount of air flow

Air pipelines that are too long will result in a loss of air flow. Precisely calculating the length of the pipeline is too complicated (almost impossible), because it is closely related to the frequency of using tools, the working interval, the number of tools used, the size of the pipe diameter and the design of the pipeline.

Usually the pressure of the main air pipe is kept at 7 kg/cm^2 - 9 kg/cm^2, the inner diameter is more than 1 inch, and the tool pipe is in the range of 3 meters, which will not cause excessive loss of air flow. To judge whether the air flow is too small, you can use a pressure gauge test. Connect one end of the pressure gauge to the air pipeline and the other end to the tool. When the tool is started, you can see the index of the pressure gauge drop, usually the pressure drops to the range of 0.5 kg/cm^2 - 0.6 kg/cm^2 is normal. If the range is more than 0.9 kg/cm^2, it is necessary to consider the transportation capacity of the air compressor, whether the air pipeline is too long or the inner diameter is too small.

To Tool  To Air pipe