

# **TONSON** VANE AIR MOTORS

## **User Manual**

Working Fluid : Compressed Air ONLY

Operating Pressure : 5.6 bar (80 psi)

Maximum Pressure : 7 bar (100 psi)

Environmental Temperature : up to 250 °F/121 °C ( Do not use in frozen condition )

Lubrication : Automatic Lubricator to feed 1 drop of oil per minute for high speed or continuous use

Operate continuously : Yes. ( Never run without load and use with less than 80% of speed at max. speed )

Lubricating oil: SAE #10 or JIS K2213 equivalent oil should be used.

Recommended speed : (0.3~1) × Maximum Speed

### **Operation Precaution**

- A. Connection of coupling between shaft and the shaft of material to be driven must be concentric.
- B. Allowable axial and radial load must be kept under 1 kg

### **Piping**

- A. Foreign matters including dust are mainly the cause of pneumatic equipment problem. Thoroughly clean the interior of the pipe with compressed to remove unwanted matters.
- B. Filter, Regulator, Lubricator and Direction Switch Valve should be installed as close as possible in the airline ahead of air motor.
- C. Airline must be installed with filter, to remove contaminant.
- D. Airline must be installed with lubricator with SAE #10 or JIS K2213 equivalent oil (one drop of oil for every 50-75 CFM of air inflow to air motor)
- E. Use pressure regulator to control the pressure at desired rate. Direct pressure supply from compressor results in unsteady flow of air.
- F. Never use smaller bore than air motor inlet for piping. It will cause large pressure loss and undesired output.

### **Rotation**

- A. Check to see if direction of rotation and connection of coupling are right.
- B. Air/Pressure control must be installed and adjusted from the prior to inlet not exhaust to prevent back pressure
- C. Never operate continuously with no load; operating continuously under the condition of no load,

increases wear and shorten motor's life.

D. For operation, adjust the valve slowly to the desired speed. Make sure that the right operating is used and never exceed the maximum operating pressure.

## MAINTENANCE

A. Inspect F.R.L regularly and replenish with lubrication oil as needed.

### Warning!

Insufficient lubrication will cause:

1. Reduction of motor life.
2. Damage spare parts.

Please mount F.R.L. near your air motors, and check the lubricator regularly.

## TROUBLESHOOTING

Condition	Cause	How to solve the problem
Do not run	<ol style="list-style-type: none"><li>1. Air supply is not enough.</li><li>2. Over load</li><li>3. Internal corrosion</li></ol>	<ol style="list-style-type: none"><li>1. Please check air input is correct.</li><li>2. Please check the load.</li><li>3. Check connection of couplings.</li><li>4. Inspect and clean.</li></ol>
Differing Rotation Direction	Air supply hose did not connect correctly.	<ol style="list-style-type: none"><li>1. Switch inlet and outlet</li><li>2. Improve the connection.</li></ol>
Power, speed, or torque is not enough	<ol style="list-style-type: none"><li>1. Pressure is decrease.</li><li>2. Air supply is not enough.</li><li>3 Back pressure at exhaust</li></ol>	<ol style="list-style-type: none"><li>1. Reset pressure.</li><li>2. Make sure air supply is adequate to supply enough air.</li><li>3. Make sure the exhaust is equipped with a proper exhaust muffler.</li></ol>



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