### How to Use

A good air supply, proper preparation and knowledge of correct usage ensure that TOHNICHI power torque tools perform at their best.



# GOOD PIPING

Most troubles with pneumatic equipment are caused by bad air pressure. Use with a sufficiently large pipe diameter and filter, pressure regulator and lubricator.

### Good piping has the following features:

1. It should not reduce air pressure.

Pneumatic equipment requires a certain minimum level of pressure for it to function. The inner diameters of the main pipe, branch pipes and hoses must be large enough, and the pipes must also be as short as possible. Use a filter, pressure regulator, lubricator, valves and joints that suit the flow. Pressure loss in the piping must be 0.1MPa or less.

2. It should not admit drain or foreign materials.

Compressed air naturally contains moisture, which should be removed with an after-cooler. Piping should have a gradient of 1% or more so that accumulated drain inside does not enter the pneumatic equipment. Branch pipes should come out from the upper side of the main pipe. Drain tanks and drain pipes should be arranged at the lowest part of the main pipe and in branch pipes. Before connecting piping to pneumatic equipment for the first time, blow air through it to expel foreign materials.

### 3. It should have oil inserted.

The air motor of a power torque tool rotates at 10,000rpm. Supply ISO VGA32 (turbine oil # 90) to the piping with a lubricator. If you do not use the tool for more than a week, remove the one-touch coupler and add about ten drops of oil. Then, rotate the tool slightly to make the oil infiltrate into the motor. This will prevent rust.

## Air pressure and operating range

When the air pressure is lower than the specified value, the allowable torque setting range of TOHNICHI's power torque tools will be limited (See the diagram below). Be sure to use the tools at their specified pressure. Providing that the air pressure is within the allowable torque setting range, the tightening torque due to the air pressure will not change.



### Example:

When using a U120CN tool (with a specified pressure 0.5 [MPa]) at a supply pressure of 0.4 [MPa]. Usable range limit (80% from the figure on the left)  $120 \times 0.8 = 96$ CN  $\cdot$  m

#### Set torque

The torque can be set between 40 and 96 [cN·m]. If the torque is set between 96 and 120 [cN·m], the automatic stop will not operate and the tool will stall. In such a situation, the tightening torque may be insufficient.

(If the tool stops automatically, the normal tightening torque is guaranteed.)

% Set torque = Tightening torque

# Notes

- 1. When the supply pressure is 0.4MPa or less, the valve function will not be reliable.
- 2. The supply pressure does not affect the usable range of semi-automatic tools.
- 3. When the supply pressure is low, use a tool that is one size larger.

