



NEWGATE TECHNOLOGIES, INC.

Installation & Operations Manual

TURBO TA Series Air-cooled After-coolers

Models TA 035 ~ TA 300

Includes Safety Information



Attention/Caution



Pressurized Equipment:

Never exceed the maximum working pressure indicated on the After-cooler data tag. **Ensure after-cooler is fully depressurized and all electrical power is disconnected before working on the after-cooler.**

Electrical:

Always install after-coolers in accordance with local electrical codes and standards. This after-cooler is not NEMA 4 or 7 rated and should not be installed in unprotected or potentially explosive areas. **Disconnect all power to after-cooler before working on it.**

Air for Respiration:

The air treated by this after-cooler should not be used for human respiration (breathing air) without approved monitoring controls and may require further additional and or specific air purification and treatment. Consult the OSHA 1910.134 norm regarding the necessary quality of compressed air for respiration or contact NewGate Technologies, Inc. for breathing air applications.

Inspection, Damage and Handling

It is the sole responsibility of the customer to fully inspect all merchandise prior to accepting the products from the freight company and to immediately make a claim with the freight company for any damages found. NewGate Technologies, Inc. cannot accept any responsibility for any freight damage once the unit has left our facility. Units should be unloaded with a forklift or an appropriate device to prevent injury.

Location

The installation area must be well ventilated in order to avoid elevated ambient temperatures, which will negatively affect the performance of the after-cooler. All after-coolers must be permanently covered from the elements and from freezing temperatures at all time. Only equipment specially designed for outside installation can be placed outdoors without protection. Enclosed compressor rooms are natural after-cooler installation sites, but be cautious and ensure that these areas are properly ventilated and have ambient temperatures not exceeding 80°F.

The unit should be installed on a firm, level base or floor. Tall units should be bolted permanently to the floor or base utilizing the bolt holes provided.

Connecting piping should be free of vibration. Where vibration exists, special flexible connections should be used and installed.

SAFETY INSTRUCTIONS

During the installation and maintenance of the equipment it is important to observe following recommendations:

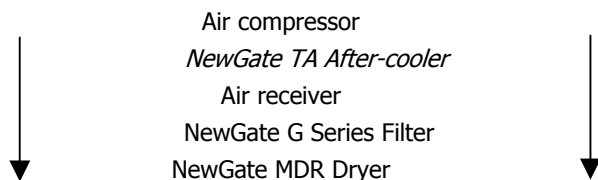
- De-pressurize the compressed air line before starting any work.
- Disconnect the equipment from electric supply before starting any work.
- During operation, as well as for sometime after switching the equipment off, surfaces are hot and can cause severe burns.
- Do not use the equipment in explosive or flammable surroundings.
- Never obstruct the air inlet of the after-cooler.

INSTALLATION

- After-cooler should be installed in a covered area, separate from compressor
- Leave adequate space around the unit for proper operation, maintenance and cooling.
- Ensure adequate cross flow ventilation at all times
- After-cooler should only be installed in a vertical position.
- After-cooler should be secured to a solid floor with the help of bolts or similar fasteners.
- After-cooler should be connected with flexible hoses at the inlet as well as the outlet.
- Observe the correct direction of the airflow (see drawing).
- Observe the correct voltage of the electric motor (115/1/60 or 230/1/60).

It is a good practice to install a bypass around the after-cooler to allow for routine maintenance without interrupting the process airflow. Any by-pass valves utilized should have a special device to avoid the accidental opening of it.

Install the after-cooler in following sequence:



Electrical Connections

After-cooler models come in different voltages and amperage ratings and should be supplied with a dedicated and properly fused power supply. Follow all local electrical codes and utilize a qualified electrician for all electrical connections.

Verify the electrical requirements for each after-cooler against the electrical diagram in this manual and as indicated on the data tags on every after-cooler.



Proper electrical grounding is a must in order to prevent electrical shock that could result in death or serious injury.

CAUTION!

- **Fans start automatically**
- **Disconnect power before any maintenance/service.**
- **The After-cooler is under pressure. Depressurize unit before servicing**

OPERATION

The TURBO TA Series after-cooler is a fin-and-tube air-to-air heat exchanger. It's functioning is similar to a car radiator, except that instead of water it is compressed air which passes through the tubes and is being cooled. Ambient air is used for cooling, by forced ventilation. As the compressed air temperature is reduced, water vapor present in the compressed air will condense. This condensed water is removed in a centrifugal separator located at the outlet of the after-cooler. The compressed air leaves the TURBO TA Series after-cooler at a temperature of about 15°F above ambient temperature and is saturated with water vapor.

MAINTENANCE

Under normal circumstances, the TURBO TA Series after-cooler does not need any maintenance. The only potential problem that could be encountered is a defective or damaged electric motor. However, during normal use, dirt, dust and other debris from the ambient air can deposit on the fins and tubes, reducing the cooler's efficiency. It is strongly recommended that the fins be kept clean. A jet of compressed air or water can be used for this purpose. Exercise caution during cleaning so as not to bend and/or damage the fins.

Warranty

TURBO TA Series after-coolers are warranted for a period of 12 months from date of installation or 18 months from date of shipment (whichever occurs first) against defects in materials and workmanship. Call NewGate Technologies prior to performing all warranty work for authorization or return of product.

The warranty is void if or for the following reasons:

- Incorrect after-cooler installation
- After-cooler identification tag is removed or altered.
- Repair or maintenance is performed without prior authorization by NewGate Technologies, and/or by unqualified personal.
- If installation and maintenance procedures are not strictly adhered to and as specifically outlined in this operations manual.

In the case of a manufacturing defect, call NewGate Technologies Inc. or your authorized dealer for repair or replacement. If authorization is given to return the product to NewGate Technologies Inc, the customer must pay the freight, whereas NewGate Technologies Inc will pay the return freight. If the after-cooler is not covered by warranty, or no warranty related defect is found, all freight costs are the responsibility of the customer.

Total liability is limited to the total cost of the after-cooler only.

This warranty covers the replacement or repair of the equipment only. Any other incurred costs or losses associated whether directly or indirectly with a defect in the after-cooler, are not covered by this warranty.

GENERAL ARRANGEMENT DRAWING

Models TA 035 to 300

| Turbo Air Model | Capacity Scfm | Weight lbs | Dimensions, Inches | | | Connections (NPT) | Power Consumption Watts | Voltage |
|-----------------|---------------|------------|--------------------|------------|-----------|-------------------|-------------------------|----------|
| | | | Length (A) | Height (B) | Depth (C) | | | |
| TA 035 | 35 | 25 | 19 | 27 | 11 | 3/4 | 60 | 115/1/60 |
| TA 065 | 65 | 44 | 19 | 27 | 12 | 3/4 | 60 | 115/1/60 |
| TA 120 | 120 | 71 | 26 | 33 | 12 | 1 | 190 | 230/1/60 |
| TA 160 | 160 | 78 | 26 | 33 | 13 | 1 | 190 | 230/1/60 |
| TA 220 | 220 | 84 | 26 | 33 | 14 | 1 | 190 | 230/1/60 |
| TA 300 | 300 | 31 | 38 | 14 | 1 1/2 | 240 | 230/1/60 | |

