

# Titan Specification

## Hunter Industrial Fan

180 Threet Industrial Road,  
Smyrna TN 37167



### Part 1 General

#### 1.1 Summary of work

##### A. Installation

1. Installation of the fan and miscellaneous structural, electrical and mechanical work other than those specifically addressed in the installation scope of work shall be provided by others. Factory authorized installation is available through Hunter Industrial. When factory installation is chosen, the appropriate scope of installation must be reviewed, and questions should be directed to Hunter Industrial: 1-844-591-FANS (3267).

#### 1.2 Submittals

- A. DWG and RVT Files provided for design considerations.
- B. Shop drawings, which include fan dimensions and weight.
- C. Specification sheets and installation guidelines, which include electrical and mechanical requirements, features, benefits and wall control information.
- D. The manufacturer shall furnish a copy of installation guide containing the operating and maintenance (if applicable) instructions for each fan.

#### 1.3 Quality

##### A. Certifications

1. The fan shall be ETL/Intertek certified pursuant to ANSI/UL 507 and CSA C22.2 No.113 in North America.
2. The fan shall be compliant with NFPA 13, NFPA 72 and NFPA 70-2011.

##### B. Manufacturers' Qualifications

1. All fans and accessories shall be supplied by Hunter Industrial.

#### 1.4 Packaging and Delivery

- A. Delivery of product shall be shipped and delivered in undamaged, new condition.
- B. Packaging shall consist of one high quality, wooden crate per fan.
- C. Each crate shall consist: motor, blades, controller, downrod, mounting hardware, and installation manual.
- D. Fan and components must be stored in a safe, dry location.

#### 1.5 Warranty

- A. The manufacturer shall replace any components defective in material or workmanship free of charge pursuant to the complete terms and conditions of Hunter Industrial's Non-Prorated Warranty in accordance to the following summary:

Airfoils	Lifetime (Parts)
Hub and Blade Holder	Lifetime (Parts)**
Gearless Motor	15 Years (Parts)**
Controller	15 Years (Parts)**
All other components	15 Years (Parts)**
Labor	1 Year

\*\* 15-year warranty only valid with factory installation. All parts shall include a 7-year warranty without factory installation. "Lifetime" means components are covered for as long as the fan is operating at the original installation site or until 7 years after Hunter Industrial discontinues manufacturing the particular fan model.

## Part 2 Product

### 2.1 Manufacturer

- A. Hunter Industrial, 180 Threet Industrial Road, Smyrna TN 37167
- B. Phone: (844) 591- FANS
- C. Website: [www.hunterfan.com/industrial](http://www.hunterfan.com/industrial)

### 2.2 High Volume, Low Speed Fans – Titan 24, Titan 20, Titan 18, Titan 16, Titan 14

#### A. Complete Unit

- 1. Regulatory Requirements: The fan shall be Intertek/ETL certified pursuant to ANSI/UL 507 and CSA standard 22.2 No. 113 in North America.

Sustainability and Efficiency: The fan shall be designed to move an effective amount of air for cooling and destratification in a wide variety of applications (Industrial and Agricultural). The entire fan and components shall not weigh more than 250 lbs. to reduce stress on building structure.

#### B. Industrial Control Panel

- 1. The fan controller shall consist of a Variable Frequency Drive (VFD) enclosed in an aluminum enclosure. This enclosure is designed to contain the VFD for maximum cooling efficiency and is pre-mounted on the downrod along with receptacles and electrical whip for a plug-n-play install. A Pam-4 relay for integration to existing fire panels is optional.
- 2. Available voltages:  
200-240 VAC 1PH 50-60Hz, 200-240 VAC 3PH 50-60Hz, 380-480 VAC 3PH 50-60Hz. Continuous operation in 32° to 140° F (0° to 60°C) ambient conditions.

#### C. Airfoil System

The fan shall be equipped with five (5) airfoils made from 6005A Structural Grade aluminum. Each airfoil shall be connected to the hub by two high strength set screws with pivoting saddles and then by a secondary locking pin system. Each airfoil shall be manufactured with a precision cut, swept style tip (instead of winglets).

#### D. Hub Motor

The fan motor shall be a high torque permanent magnet motor rated for continuous operation at maximum speed without the use of a gearbox or other mechanical torque multiplier. The motor shall be a totally enclosed non-ventilated design with the capacity for continuous operation in 32° to 140° F (0° to 60°C) ambient conditions. The hub motor enclosure shall be precision cast A380 for low weight and maximum strength.

#### E. Mounting System

The mounting system shall be designed for quick, secure installation to a wide variety of ceiling structural supports. All components of the mounting system shall be made from A36 steel and ERW tubing. The downrod shall be pre-wired with a pin and sleeve connection for simple, safe and economical installation. All mounting bolts shall be SAE Grade 5 or equivalent.

#### F. Safety Cables

- 1. The fan shall be equipped with one 1/4" 7 x 19 Safety Cable, the length of the downrod plus six feet, composed of high-tensile ANSI 316 stainless steel. The minimum breaking strength of the cable assembly supplied is 4,750 lbs. Wire rope conforms to ASTM A492. In addition, three 1/4" malleable wire rope clamps will be included.

## G. Guywires

1. The fan shall be equipped with custom guywire system comprised of four separate components:
  - A beam clamp with a swivel for inclined application supplied with a high tensile set screw for a secure grip on both parallel and tapered flanges.
  - Turnbuckle design to be tightened by hand with brass tipped set screws to prevent loosening.
  - Gripple, a locking fastener that is wire-diameter specific, for terminating cable when bracing and suspending static and dynamic loads. After install, locking screws can be fully inserted to secure the internal wedges in place.
  - Guywire cable, 1/8" 7x7 wire rope with integrated hook for quick and easy attachment to the provided beam clamp.

## H. Wall Control

1. The fan shall be equipped standard with a 4.3" Glass Projected Capacitive touchscreens in an extruded aluminum enclosure. This controller provides the user with full operation of the fan(s) such as FWD/OFF/REV, Variable Speed Control function, and provides fault readout information for effortless operation. The 4.3" is capable of controlling up to 10 fans and provides users with scheduling, grouping and password protection. A 7" optional upgrade control is available. The 7" control includes all the functionality of the 4.3" but also includes WI-FI, the ability to control 30 fans, and supports the optional Environmental Control feature. The optional Environmental Control allows the fan to automatically adjust its operation based on inputs of the fans' environment. Continuous operation in 32° to 140° F (0° to 60°C) ambient conditions.

## Part 3 Execution

### 3.1 Preparation

- A. An existing building must have a mounting structure able to support two times the hanging weight of the fan. The structure the fan is attached to shall be capable of supporting a torque load of up to 70 ft·lb (95 N·m) of torque. Consult a structural engineer if necessary.
- B. Minimum Clearances
  1. Airfoils must be at least 10ft (3m) above the floor.
  2. The sweep area (horizontally and vertically) must be at least 2ft (0.61 m) from any obstructions such as lights and cables.
  3. The fan shall not be applied in any location where it may be subject to cross winds over 25 mph or in close proximity to HVAC or radiant heat outputs.
- C. Item such as lights, cables, or any other obstructions must be relocated or removed if they do not comply with the minimum clearance requirement before installation.
- D. Dedicated branch circuit protection is required to the fans.
- E. A twist lock receptacle must be placed 5 ft outside the sweep area. Refer to the installation manual for a list of receptacles part numbers.

### 3.2 Installation

- A. Any installation shall be performed by a factory authorized installer in accordance with the installation manual.
- B. In buildings equipped with ESFR sprinklers or any sprinklers, you must comply with NFPA 13 and NFPA 72 guidelines for application of these fans.