

**Tough Tek Metals • 800-331-8200 • Fax 563-538-4392 • www.toughtekmetals.com**  
**Model 504HW Tubular Steel Storm Door**

### **SCOPE**

To furnish Tubular Steel Frame Self-Storing Storm Doors with hardware, door closure, durable kick panel(s), an adjustable sill sweep, a unique pre-hung frame liner with integrally mounted weather seal, and an integral security screen that protects the entire glass portion of the door, as manufactured by Lansing Housing Products dba Tough Tek Metals.

### **GENERAL**

1. Materials - The master frame shall be of 18-gauge, zinc impregnated (G-90) tubular steel. All tubular profiles shall be engineered specifically and exclusively for use as component parts for door fabrication.
2. Frame liners and door sweeps shall be formed from 6063-T5 aluminum.
3. The kick panels shall be of 18 gauge galvanized sheet steel, embossed for added rigidity.
4. Frame liner shall be of extruded aluminum. The head and side frame liners shall be designed to receive a flexible weather seal for protection against inclement weather and dust infiltration. The head frame liner shall be so designed and extruded to also function as a drip cap over the top of the door.
5. The door shall be manufactured with not less than five hinges, (6 optional). Leaf hinges shall be 430 stainless steel alloy, .072 wall thickness with stainless steel pins pivoting on oil-lite bronze bushings. Each hinge is integrally assembled into the Z-bar frame liner with stainless steel rivets.
6. The bottom of the doors shall have an aluminum extrusion that will accept a durable vinyl plastic door sweep, adjustable to a minimum of one (1) inch.

### **CONSTRUCTION**

1. The tubular frame of the door shall be of 18-gauge, 1 x 2 tubular steel. The miter corners are uniformly welded on both the inside and the outside edge.
2. Two horizontal mullions of 18-gauge, 1 x 2 steel are fully welded into the main frame. The embossed 18-gauge steel kick panels are formed to two 90-degree bends and inserted into the frame assembly with the flange resting on the back surface of the frame and secured with screws on 6" centers.

### **SCREENING**

1. Screen frames shall be the TT200. An extruded aluminum frame with a jaw clamp design that is pressed with a 20 ton press to assure a positive lock on the stainless steel screen, tested to withstand a 60 lb impact. The frame shall be of miter joint construction and welded at the corners.
2. Stainless steel wire mesh of .023" standard, (.018 or .028" optional) diameter shall be made an integral part of the screen insert as required. Material shall be alloy 304 stainless steel.
3. Self-Storing Window – the 6063-T5 alloy aluminum single hung vertically operated window unit shall be placed into the doors main frame and secured to inside of door frame. 1/8" tempered safety glass, miter joint construction with corners securely staked. Zinc die cast swivel key and spring loaded slide bolts. All panels are easily removed from the inside for cleaning. Screen insert (fiberglass screen fabric or optional stainless steel wire mesh) further protects from insect entrance.

### **FINISH**

1. All exposed surfaces of all metal parts shall be free of surface blemishes. All sections either assembled or fabricated in factory, shall be properly cleaned prior to powder coat paint.
2. All prefinish treatments and wash coats shall be bake oven processed at 400 degrees F. Air-dry finish shall be unacceptable as offering an inferior finish for high density usage.
3. All exposed areas of stainless wire cloth and frames shall have a finish of polyester powder coat paint, electrostatically applied, and cured to a hard durable finish. Powder coat paint finish shall be a minimum of 1.5 mil thickness.

### **INSTALLATION KIT**

An installation kit shall be furnished with each door. The kit shall include all necessary zinc plated steel Phillips head screws, adjustable door closer, chain with hold up spring, push button type latch and brochure describing detailed installation procedures.