

TOTAL DOOR

Section 3 – Test & Performance Data

Hurricane Rating – Total Door® Storm Sentry™

Storm Sentry™ door, rating from Certified Testing Laboratories (CTL) and Miami-Dade County Notice of Acceptance (NOA)

03-0822.01 Expiration Date July 29, 2009

03-0822.02 Expiration Date July 29, 2009

The CABO Approval Number for ICBO, BOCA and SBC

Openings is listed under Warnock Hersey International which is CABO (Council of American Building Officials) approved for all three national building codes:

- Building Officials and Code Administrators (BOCA)
- International Conference of Building Officials (ICBO)
- Southern Building Code Congress International (SBC)
- CABO info has been combined into ICC – evaluation services
- ICC #AA690 – State of California
- Site to view is www.icc-es.org

Underwriters Laboratories R7764

Warnock Hersey Testing Agency approved by the City of Los Angeles. RR#24080

Warnock Hersey Approval by Additional Agencies

Warnock Hersey Inc., our fire rating testing laboratory, has been evaluated and approved by other agencies as well, including the following:

- Standards Council of Canada
- Fire Marshall of the State of California #3555-0855:100, 101 & 102
- City of Los Angeles RR #24080
- Materials & Equipment Acceptance Division, City of New York MEA 260-94-M
- City of Chicago

Warnock Hersey Report Numbers

We operate under the umbrella of ITS/WHI approvals.

Warnock Hersey report numbers for Openings Total Door® are:

Steel Type

Report Numbers: 495-0205 (7/79)
495-0483 (3/83)

Particle Core Type

Report Numbers: 495-0046 (2/77) 495-0617 (6/84)
495-PSV-0122 (5/81) 485-PSV-0817 (1/90)

Total Door listed products based on ITS/WHI testing

This document certifies that Intertek Testing Services/Warnock Hersey has fire, smoke infiltration, and cycle tested the TOTAL DOOR manufactured by Openings, of Pontiac, Michigan, and has certified the following for positive pressure fire resistance compliance under UBC Standard 7-2 (1997) Parts I and II and UL 10C (1998), and NFPA 252 (1999):

Frames:

All frame constructions shown in UL-63 are usable with Total Door. Total Doors may be used with all labeled frames of any manufacturer. Total Doors may be retrofitted to any existing labeled frames that are structurally sound.

FR-100 KD or welded, 20 minute to 3 hour, 18, 16, or 14 GA., cased with applied head stop, single or double rabbet, for masonry, drywall or structural steel walls, with a maximum door opening of 8' 4-3/8" x 10' 0".

Frame assemblies with side lights and/or transoms in masonry walls can have a maximum size of 13' 6" x 12' 0". In drywall the maximum size is 12' 8" x 11' 4".

FR-200 Six piece, prime or prefinished frame, 20 minute to 1 1/2 hour, cased with applied head stop, for masonry or drywall, with a maximum door opening of 8' 0" x 10' 0".

Tubular 2" x 2" or larger steel tube, 20 minute to 3 hour, with applied head stop, for single, pair or double egress, to maximum size of 8' 4-3/8" x 10' 0".

Note: Total Doors, single, pair or double egress, up to 1 1/2 hour may be mounted directly on masonry without the use of a metal frame.

Doors:

3 hour Steel doors, hollow core, with temperature rise over 650 degrees F., honeycomb, polystyrene or metal or stiffened with;

- a) 20, 18 or 16 Gauge skins
- b) Single swing with maximum size of 4' 0" x 8' 0"
- c) Pairs and double egress with maximum size of 8' 0" x 8' 0"
- d) Levers, operating push/pull grips and panic devices, all without the use of coordinators, flush bolts, astragals, vertical rods or floor strikes.

3 hour Steel doors, hollow core, with temperature rise less than 250 degrees F., with;

- a) 20, 18 or 16 Gauge skins
- b) Single swing with maximum size of 4' 0" x 8' 0"
- c) Pairs and double egress with maximum size of 8' 0" x 8' 0"
- d) Levers, operating push/pull grips and panic devices, all without the use of coordinators, flush bolts, astragals, vertical rods or floor strikes.

- 1 1/2 & 3/4 hour Steel doors, hollow core, with temperature rise less than 250 degrees F., with;
- 20, 18 or 16 Gauge skins
 - Single swing with maximum size of 4' 2-3/16" x 9' 0"
 - Pairs and double egress with maximum size of 8' 4-3/8" x 9' 0"
 - Levers, operating push/pull grips and panic devices, all without the use of coordinators, flush bolts, astragals, vertical rods or floor strikes.
- 1 1/2 & 3/4 hour Steel doors, hollow core, with temperature rise over 650 degrees F., honeycomb, polystyrene or metal stiffened with;
- 20, 18 or 16 Gauge skins
 - Single swing with maximum size of 4' 2-3/16" x 9' 0"
 - Pairs and double egress with maximum size of 8' 4-3/8" x 9' 0"
 - Levers, operating push/pull grips and panic devices, all without the use of coordinators, flush bolts, astragals, vertical rods or floor strikes.
- 20 minute (with hose stream), Steel doors, hollow core, honeycomb, polystyrene or metal stiffened with;
- 20, 18 or 16 Gauge skins
 - Single swing with maximum size of 4' 2-3/16" x 10' 0"
 - Pairs and double egress with maximum size of 8' 4-3/8" x 10' 0"
 - Levers, operating push/pull grips and panic devices, all without the use of coordinators, flush bolts, astragals, vertical rods or floor strikes.
- 20 minute Fire rated solid core wood doors with wood veneer, HPL, MDO and FRP
- Single swing with maximum size of 4' 0" x 9' 0"
 - Pairs and double egress with maximum size of 8' 0" x 9' 0"
 - Levers, operating push/pull grips and panic devices, all without the use of coordinators, flush bolts, astragals, vertical rods or floor strikes.
- Blast doors Very low range blast doors, one pound per square inch (VLR) are available in all labels except temperature rise, in sizes to 3'0" x 8'0", and in non-labeled removable mullion pairs up to 3'0" x 8'0".
- Closers. Mortised closers are approved for all fire ratings including three (3) hour.
- Electric Electric doors, with inclusion of a solenoid for remote control of locking/latching is approved on all labels as part of the door system. A separate label for the solenoid is not required.
- Holders Mortised semi-concealed electromagnetic holder mounted in the door for all labels.
- Lead One-sixteenth inch lead-lined doors are available in all labels on steel doors of up to 28 square feet in single swing. Pairs of doors may be any size up to 4'0" x 7'0" with maximum 1/32" thick lead.
- Lights Labeled vision lights on all fire doors with lite kits labeled for Positive Pressure, under standard Firelite & Pemko procedures when acceptable to the Authority having Jurisdiction.

- Kickplates Kickplates of any height, when using Openings standard bonded wraparound kickplates without mechanical fasteners for all labels.
- Panics Panic exit devices have been tested for compliance to UL305 door for all labels.
- Pockets Pocket door applications using any closer labeled for positive pressure. When the closer is mounted on the wall, the wall must be reinforced and the closer installed per the TOTAL DOOR installation drawings. The certification applies to 90 degree through 180 degree installations.
- Smoke & Draft The S mark signifying the acceptance to UBC Standard 7- 2 (1997) Part II may be applied to the label.
- Special finishes: All labeled steel doors including temperature rise may have high pressure laminate, genuine wood veneers, PVC, FRP, stainless steel, aluminum or brass faces one or both sides.



Monday, December 26, 2005

Total Door listed products based on Certified Testing Laboratories testing

The following doors were tested by Certified Testing Laboratories, 7252 Narcoossee Road, Orlando, FL 32822, and have the ratings indicated.

Blast doors have a rating of 180 pounds per square foot (1.25 PSI) on single swing up to 3' 0" x 7' 2" and pairs up to 6' 0" x 7' 2" both in swing and out swing.

Hurricane doors Have design load ratings of 70 and 80 pounds per square foot on single swing up to 3' 0" x 7' 2" and on pairs up to 6' 0" x 7' 2" both in swing and out swing.

file; whi160

TOTAL DOOR

Section 3 – Test & Performance Data

Labeled Frames for TOTAL DOOR®

The TOTAL DOOR® hinge and locking system actually stiffen the frame. That is why even with pair and double egress configurations it is able to pass fire tests using a simple cased (non-rabbetted) frame with ZERO deflection of the door to frame during the fire test. Conventional labeled steel doors separate from the frame over 2” and are still given a fire label. By always testing with a generic cased frame, we are automatically allowed by WHI and UL to use single or double rabbetted frames because they are considered stronger and stiffer than a cased frame.

A labeled TOTAL DOOR® can be installed in any WHI or UL rated frame. Even if the hinge reinforcements are broken, if the frame is structurally sound, you can properly install a WHI labeled TOTAL DOOR®.

Fire Labeling Existing Door Frames

Warnock Hersey Inc. can label existing door frames that are missing labels. On retrofit jobs, you do not have to replace the frame simply to obtain a labeled frame.

WHI will examine and inspect door frames and if found to be eligible, they will affix a fire rating label to the door frame. If a frame is 16 gauge steel and in good condition WHI will probably be able to label the frame. There is a charge for this service.

WHI requests that a representative accompany them to locate the door openings to be inspected. Also during the inspection, they will require the assistance of a locksmith, door tradesman or building mechanic to provide assistance in fastening labels to the frame by drilling two 1/8” holes and installing drive rivets. WHI also requests that a local building inspector be on site to observe its examination, inspection and labeling procedures.

You can contact WHI at: (608) 836-4400, Fax (608) 831-9279

TOTAL DOOR® labels are found on the TOP edge of the door.

TOTAL DOOR® Installation & Fire Code Compliance

With the TOTAL DOOR® product line, the installation instructions and caveats are part of the listed procedure. In other words, violating the TOTAL DOOR® installation instructions voids the label of the opening. You may have labeled components but an unlabeled opening. Additionally, if TOTAL DOOR® is not installed by a factory certified installer, employed by supplier, no warranty exists. In the event that a warranty is issued without careful inspection, its issuance is invalid.

If the opening is not labeled, the Fire Marshal is obligated to deny issuance of an occupancy permit. If he is unaware of this, an anonymous communication to UL or WHI will make the Fire Marshal aware of the condition.

TOTAL DOOR

LEED Information

The U.S. Green Building Council (USGBC) has developed the LEED (Leadership in Energy and Environmental Design) Green Building Rating System. This system provides a definitive national standard for what constitutes a “green building.”

No product or building material may be accurately classified as “LEED certified.” The LEED rating system was designed to classify entire building projects. Building materials may provide “points” toward the LEED status of your project.

Total Doors may provide points for your LEED project in the following categories according to LEED version 2.2.

- **Credit 4.1 & 4.2 – Recycled Content**
80% post industrial content in our steel. Average weight = 100 lbs.

- **Credit 5.1 – Locally Manufactured**
Manufactured in Waterford, Michigan.

- **Credit 5.2 – Locally Harvested Materials**
 - Steel: Rouge, Michigan (31 miles)
 - Polystyrene Cores: Byron Center, Michigan (148 miles)
 - Paint: Columbus, Ohio (236 miles)

- **Credit 6 – Rapidly Renewable Materials**
Wood veneers are from sustainable forests (10% of materials).

For more information on the LEED Rating System, visit the U.S. Green Building Council's website at www.usgbc.org.

COMPARATIVE PERFORMANCE

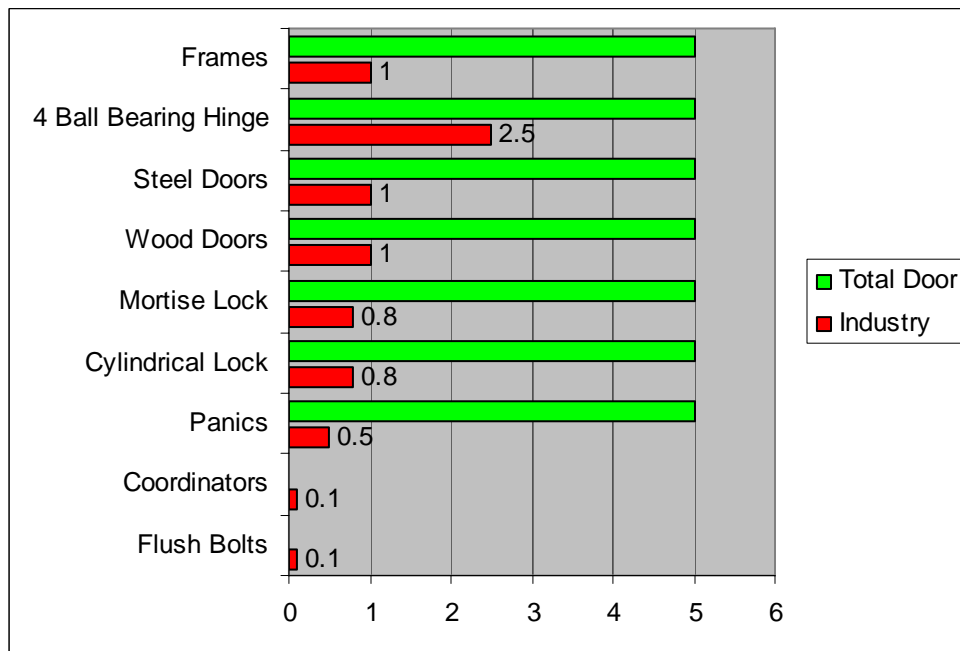
TOTAL-DOOR vs. STANDARD DOORS & HARDWARE

The attached chart shows performance standards as established by ANSI, BHMA, DHI, SDI, FHDA, NWMA, NFPA, California Title 19, Section 80.15, "Construction Standards and Performance Tests of Emergency Exit and Panic Hardware SFM-33.3" and Federal Guide Specifications for standard doors and hardware.

Standard doors and hardware are not tested as a system, but rather as individual components, each tested in isolation under perfect conditions in a laboratory. TOTAL DOOR, on the other hand, has been tested as it is used in the field, that is, as a complete system – door, body, hinge, frame, locking mechanism, panic device, etc.

It is significant and important to note that W.H.I. cycle tested a labeled pair of doors with panics to 10 times the standard number of cycles (1,000,000) and found only insignificant wear (.003"). The doors required no lubrication, and no maintenance during the long test.

ANSI MINIMUM FEDERAL PERFORMANCE STANDARDS VS. TOTAL DOOR Millions of Cycles





Life Cycle Costs and Integrated Door Systems

Traditional door and hardware may require up to fifteen manufacturers and four different trades with blurred responsibility, to fill a hole in a wall. The integrated systems approach taken by Total Door says there should be one manufacturer that provides all the materials, installation, and full responsibility for the functioning of the door. All work should be completed in compliance with the specification and all relevant legal requirements. Doors should be installed on time, every time, under a sole source of responsibility. As someone responsible for the doors in your school, you well know that you will live with the doors long after they have been installed.

When we think of life cycle costs, we usually think in terms of taking the cost of a product and dividing it by the life expectancy of the product to get the amortized cost per year. As an example, a \$1,000 purchase with a 10 year life span equals \$100 per year. This sounds logical but is inadequate for making comprehensive product comparisons. To identify life cycle costs we need to take into consideration a number of variables.

1. When evaluating operating/industry cycle standards:
 - How does the real-world environment vary from that of the test laboratory? In other words how reliable are test standards?
 - What is the impact of the careful selection of components, adjustments and lubrication, and real-world abuse conditions?
2. How is the failure rate affected by?
 - Quality of the installation.
 - The number of parts.
 - The type of fasteners used.
3. What are the true values of avoided costs?

Mean Time to Failure and the Test Environment

Most door and hardware manufacturers reference the ANSI standards their door components meet. But what does this mean in the real world? Let's use the ANSI standard for Grade 1 Panic exit devices which is currently 500,000 cycles.

The BHMA/ANSI performance level of 500,000 cycles is developed by testing in laboratory conditions, on carefully selected product, with perfect installation, zero abuse, gentle operation and perhaps with occasional adjustments.

Compare this to the last installation you witnessed. Were all the components installed by factory trained technicians? Did they carefully pick through the components and make sure they

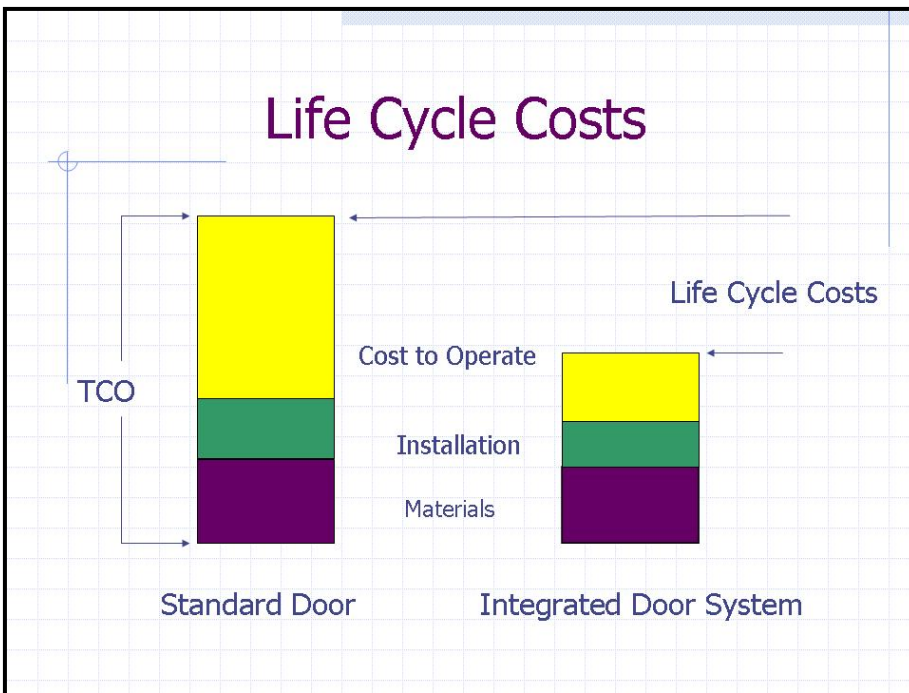
discarded any part that did not meet the highest standard? Do your students gently open and close your doors?

Now we can begin to see how field operating cycles can differ significantly from published test standards due to the quality of the installation and installed parts. You may get the journeyman installing parts or you may get the apprentice. They're typically working in dark, dirty, noisy conditions with lots of other trades running around. This might explain why your maintenance budget is so high early in the life of your doors because the mean time to failure occurs early in the doors life cycle. Eventually you get the bugs worked out but you have exhausted your budget.

We would like to demonstrate how a systems approach to these and other issues can dramatically reduce installation, and hardware issues.

The following chart highlights the key components of a life cycle cost comparison. We must have a full accounting of three key components.

1. The initial cost for the door and hardware materials.
2. Installation costs.
3. Our best estimate of future operating and maintenance costs.



Life Cycle Costs (also referred to as Life Cycle Costing and Life Cycle Analysis) is the comparison of the “difference” between the total cost of ownership of two or more similar items.

This gives us the Total Cost of Ownership (TCO) for a given product. Life Cycle Costing measures the difference between the TCO's for similar products. Financial analysts often will also apply a capitalization formula to the Life Cycle Costs in order to show the value in dollars based on a specified rate of return for their organization.



Number of Parts

The next chart provides a comparison of the list price of a standard Grade 1 vertical-rod panic device and the price of an equivalent Total Door panic device. You might ask “How can they both meet Grade 1 standards yet the vertical-rod panic costs four times more than the system panic?” The answer lies in the number of parts required to accomplish the same function - 150 plus parts for the standard door hardware versus 13 on the integrated door system. The reduction in the number of parts is achieved by integrating the function of the panic within the door. Put simply, all we need to do is unlatch the door.

Comparison of the number of parts and the number of parts handled.

	<u>GRADE 1 VERTICAL ROD PANIC DEVICE</u>		<u>TOTAL DOOR SYSTEM</u>
List Price	\$1,250		\$310 (3hr label)
Typical Selling Price	\$750		\$200
Net Difference		\$550	
Number of parts	150+/-		13
Ratio	100%	Vs.	9%
Number of panic parts handled by the installer	69	vs.	0
Life cycle expectancy	500,000	vs.	5,000,000

We must also note that the number of parts handled by the installer is equally significant – 69 parts for the standard door versus 0 for the Total Door. Why are there zero parts handled? Because as part of the integrated systems approach, the panic device is preinstalled at the factory instead of being installed in the field.

Product Issues That Accelerate Failure

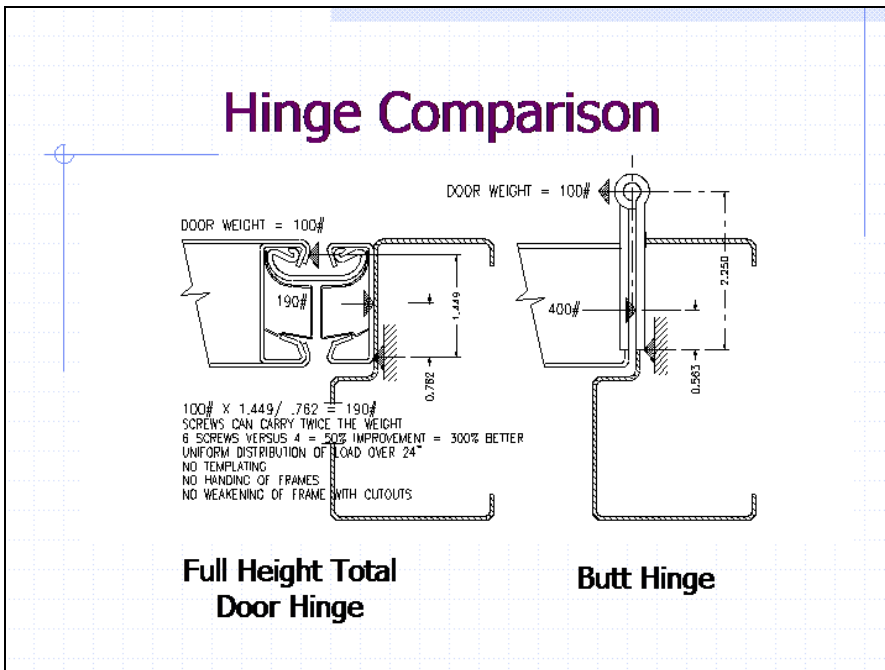
The door and hardware business has been historically slow to accept new ideas. In many cases we see hardware configurations used because at the time they were developed it was the best solution for a given problem. Unfortunately there are better answers today but it can be difficult to change from things we are used to.

The **cushion stop closer arm** is a real door, frame and hinge buster. Opening the door until it is stopped by the arm and then pushing hard on it will absolutely cause door and hinge failure. The primary forged steel arm is stronger than the other door components. This same arm will not harm a Total Door because the hinge is strong enough to cause the primary arm on the closer to bend in the strong plane before it can damage Total Door components.

Surface mounted vertical rods are bare, exposed and very easily damaged by carts or intentional abuse. **Concealed vertical rods** are an abomination as far as facility maintenance is concerned. They are difficult and time consuming to repair. The architect and owner often face a dilemma trying to choose between these two undesirable options. Total Door system does not need or use vertical rods.

Coordinators and auto flush bolts which have only 10% to 20% of the life of other door components are prone to early failure. Total Door does not use coordinators or flush bolts so we also eliminate them as a point of failure.

How Hinges Accelerate Failure



Hinge design has a major impact on the life cycle costs of a door.

On the right side of this detail we have a horizontal cross section of a standard 4-1/2" x 4-1/2" heavy duty, ball bearing butt hinge. The frame must be weakened in three locations in order to mortise the hinge leaf, necessitating the welding of hinge reinforcements to the remaining frame. The force is transferred to the frame via the hinge pin which multiplies the loads on the screws by a factor of four. This is why hinge reinforcements begin failing before reaching one million cycles. [The 100 pound door load x 2.25" (center of pin to edge of leaf) divided by .563" (center of screw to the edge of hinge) equals 400 pounds.]

What happens to the door, frame or hinge when someone leaves a wedge or broom handle in the hinge jamb and then tries to close the door? Obviously this creates a leverage point the door was not designed to support. This action will produce failure of the reinforcements, door, hinge or

frame. [This example assumes that the broom resistance point is 1" from the hinge pin. 20lb closing pressure x 36" door width x 2.25" / .563" = 2,877lbs.]

The high strength, stainless steel support ribbon used in the Total Door hinge system eliminates one of the major causes of failure – friction! The hinge geometry allows for rotation along the hinge axis point so that the forces caused by door weight are not multiplied as they are with the four butt hinge. The Total Door hinge is also more secure because the pivot point runs the full height of the door. In addition, the full height design of the hinge eliminates the ability to insert a broom between the door and frame to prop it open, with typically disastrous results.

Fewer Parts mean Fewer Problems

Total Door reduces failures and has a positive impact on life cycle costs by:

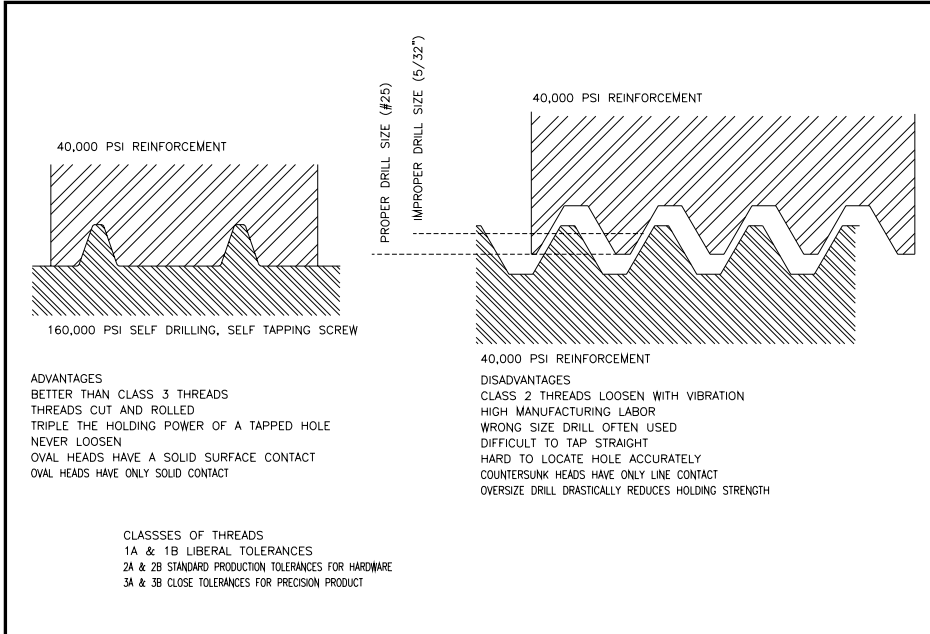
- Eliminating 87% of the screws found in the competing panic exit device
- Dramatically reducing the number of manufactured parts in an opening by eliminating vertical rods, coordinators, astragals and flush bolts.
- Using a systems approach and installing all the hardware at the factory.

Here is a side by side comparison of a Total Door system next to a conventional door. What you also see is the way these ship from the factory. The Total Door is completely assembled while the regular door will ship in individual pieces. In fact, all the pieces you see in the picture on the right are for just one leaf!



The number of parts has a dramatic effect on reliability and maintenance requirements of a door. The Total Door as a whole uses 67% fewer parts, vastly improving its reliability. This is particularly important when you consider that for the Total Door full height hinge, out of 19 parts, 15 are self-drilling, self-tapping screws – the hinge system itself is made up of only four parts.

Self-Drilling, Self-Tapping Screws



The use of self-drilling, self-tapping screws is critical as they have proven to provide superior strength and resist loosening. This superiority is due to the fact that the self-tapping screw partially cuts and partially roll forms the mating thread for superior contact. Compare this to the requirements for drilling and tapping a field installed machine screw. Just by using a 5/32" versus a #25 drill bit for a #10/24 tapped machine screw (a difference of only 0.007!) we would reduce the holding capacity to about 10% of the intended rating. A 700# holding capacity has been reduced to 70#.

Installation

As we have demonstrated, not only are the number of parts dramatically higher with standard hardware but the number of parts handled by the Total Door installer is significantly lower. Fewer parts handled means less installation time and fewer opportunities for something to go wrong. When comparing Total Door to "other doors", it is important to look at the total cost of installation. Total Door simplifies installation because it is an integrated door system, with all the hardware pre-installed at the factory.

The following example of installation time for a sample door is taken from the 2002 R.S. Means – Building Construction Cost Data. You can use this list as a guideline for comparing the total cost of your door installations.



R.S. Means sample installation hours

Example 3070 Interior Door

Install and Swing Door
 Kick Plate
 Lite Kit Glazing – 1 sq. ft.
 Panic, Vertical Rod, with Exterior Trim
 Surface Closer with Standard Arm
 Total Hours

Labor Hours Other Doors	Labor Hours Total Door
0.941	0.941
0.533	0.0
0.860	0.0
2.000	0.0*
1.333	0.333 adjust only
5.667	1.274

4.393 more hours for the “other” door!

Note: The time for Panics/Vertical Rod and Exterior Trim should be reduced by 1 hour if using mortise locks vs. a panic. (1 hour vs. 2 hours) Total Door labor hours are based on the use of Total Door hardware. Your times may vary based on additional features and door configurations.

And you don’t need to worry about:

- Hardware Rooms
- Shrinkage
- Supervisor Time
- Coordination of Assembly Activities
- Space Requirements

Capitalization of Life Cycle Costs

Some of you may face “hurdle” or capitalization requirements for capital improvements. If this is the case we need to identify the maintenance and/or repair costs that are reduced or eliminated over the timeframe you select. For example, let’s assume the time horizon is seven years. During this time you may need to replace a panic exit device on a standard door. Because of the higher cycle count and lifetime warranty on the Total Door you would not have this same expense. If it costs you \$750 for the part and \$230 to install a replacement, your total avoided cost is \$980.

However, this \$980 is in the future and you need to determine what it is worth today. When determining capitalization we annualize the costs savings and divide by the selected capitalization percentage (For this example 15%).

$\$980 / 7 \text{ years} = \$140/\text{yr}$
 $\$140 \text{ annual savings} / .15 = \933

If there are also cost savings on the initial purchase these must be added to this value to give the full value of your life cycle cost savings.

Example:

Let’s say the hardware and installation labor savings on the Total Door come to \$500.
 (Remember the hardware is installed at the factory and because of the simpler mechanism has



fewer parts). When added to the \$933 from above we see our total life cycle savings equal \$1,433.

Conclusion

What Factors Lower Maintenance & Life Cycle Costs?

1. Fewer but higher quality components.
2. Eliminating fasteners and where they are required, using self-drilling, self-tapping sheet metal screws instead of field drilling and tapping.
3. Factory assembly and hardware installation.
4. Applying a systems approach to the design and manufacture of the door and hardware.
5. Local service with single source responsibility.

Here are some examples that highlight these points.

- Panic device - 13 vs. 150 components; 5 screws vs. 42 screws
 - Factory installation of panic, 0 field hours vs. 2 hours in the field
 - A typical opening can have as many as 15 manufacturers.
 - Frame, hinge, door, lock, panic, coordinator, astragal, threshold, stops, flush bolts, kick plate, closer, lite kit, glazing, gaskets and sweep.
- And 4 trades
- Drywall (Setting Frames)
 - Carpenter
 - Painter
 - Glazer

The local Total Door Distributor sells, installs and services Total Door. Single responsibility means no finger pointing, especially for issues like code compliance, ADA guidelines, and reliable function.

Through this article we have hoped to educate on the advantages of the Total Door system. However, this same analysis could be applied to any major purchase you are considering. You could buy a kit car if you wanted to, but I think most of us would prefer to buy a car already assembled and ready to drive off the lot. Total Door has brought this same philosophy to the door and hardware business. We hope you enjoyed this white paper and look forward to any questions or comments you may have.



LIMITED WARRANTY

This limited warranty covers the materials and workmanship of its products manufactured after January 1, 1997 as follows for two and one-half (2-1/2) years from the ship date or two (2) years from the installation date, whichever occurs first:

Door Bodies - two (2) years.

Electrical Components - two (2) years.

Locks: mortise lock bodies and push/pull mechanisms (Q289SA, M22SA & M24SA) - for the lifetime of the original installation.

Exit Devices Panic Buttons (P16SA) - for the lifetime of the original installation.

Hanger Rods (H17, H50, H30 - Standard Black or white) - for the lifetime of the original installation.

Retainers (R12SA) - for the lifetime of the original installation.

Flush Panic Actuator (PF221B with X35 Screw) - for the lifetime of the original installation

Hinge (H-13) - for the lifetime of the original installation

This limited warranty shall apply only if the product is properly stored, installed and maintained in accordance with Openings' written instructions. Openings will, at its option, replace, repair or refund the purchase price paid to Openings for products which in its opinion, are found to be defective in workmanship or material under normal use and service within the above defined time periods. Openings' sole responsibility is as stated herein and it shall not be liable for consequential, indirect or incidental damages.

This limited warranty is in place of all other warranties, express or implied, and excludes any warranties of fitness or merchantability. No agent, representative, dealer, or employee of Openings has the authority to increase or alter the obligations of this limited warranty.

Notice Requirement

Purchaser is responsible for inspection of product upon receipt and for giving written notice to supplier and Openings within 30 days of discovery of unsatisfactory performance.

Storage and Handling Instructions

1. Store Total Doors flat on a level surface in a dry, well ventilated building, separated by spacer blocks provided with original shipment so that no projecting hardware touches any part of an adjacent door.
2. Cover doors to keep clean and avoid discoloration. Cover must allow air circulation.
3. Wood doors or steel doors with plastic laminate or wood faces should not be subjected to extremes of heat and/or humidity conditions. Relative humidity should not be less than 30% or more than 60%.
4. For wood doors, follow manufacturer's special handling and finishing instructions that apply to wood doors.
5. Handle with clean gloves and do not drag doors across one another or across other surfaces.

Installation

Total Door Systems must be installed in full compliance with manufacturer's written instructions.

Maintenance

To assure coverage under this limited warranty, the following must be maintained: the adjustment of hardware and fasteners attached to or fitted into the doors or frame, the finishes on all wood surfaces and the moisture protection on exterior doors.

Exclusions

This limited warranty does not include:

- Total Doors that are not installed by a factory certified installer, employed by supplier. If a warranty was previously issued the warranty is void.
- Any products which, in the opinion of Openings, have been modified, repaired or altered in any way without the express written consent of the Company.
- The appearance of field finished doors.
- The appearance of high gloss surfaced doors.
- Natural variations in the color or texture of wood.
- Doors with cutouts for lights, louvers or other hardware nearer than six inches to the door edge, or doors with less than six inches between cutouts.
- Normal wear and tear including wear-through of finishes or deterioration for reasons other than material and workmanship.
- Items by other manufacturers.
- Plastic laminate or wood surfaced doors exposed to relative humidity of less than 30% or greater than 60%.
- Field Painting of Hinge Verticals (H12 or H13 or H14 or H15).

Exclusions for Exterior Doors

An exterior door is one that cannot be controlled on both sides for temperature and humidity. The following conditions will void the limited warranty:

- Use of concealed closers.
- Wood or plastic faced or wood core doors.
- Doors and frames not properly protected by flashing or drip caps.
- Doors that are not sealed top and bottom.