



LISTING REPORT - MACHINING

Issued: Oct 15 2009 2:44PM

Inspection Tests And Evaluation Of

Fyrewerks FyreFrame 90 minute Fire Door Frame (20514)

RENDERED TO
FyreWerks, Inc.
12110 N. Tejon Street
Westminster, CO 80224

GENERAL: This Report gives the results of the inspection, tests and evaluation of the above for compliance with applicable requirements of the following standards : UBC 7-2 (1997) : UBC 7-2 (1994) : CAN / ULC S104 1980 (R1985) : ASTM E2074 (2004) : NFPA 252 (2008) : UL 10(b) (2009) : UL 10(c) (2009)

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Correlation for Multiple Listees

This information is only available to the applicant.

PRODUCT DESCRIPTION

Product Covered:

Fyrewerks FyreFrame 90 minute Fire Door Frame

Product Description:

Product Description

Product Covered:

FyreWerks FyreFrame 90 Minute Fire Rated Door Frame

Product Description:

Category C "Proprietary Frame" - Intumescent/Wood door frame for installation in 90 minute locations in steel/wood stud, drywall or masonry openings. Category A, Category B or Neutral Pressure fire rated wood/composite doors may be used. Category G Edge Sealing System is not required. Frame can also be used as a communicating frame.

Maximum Door Size: 48" wide x 96" high

Minimum Frame Depth 4 5/8"

Ratings

90 minute Neutral Pressure or Positive Pressure Fire Rating.

Testing was conducted in accordance with the following standard methods of UL 10(c) 2009, UBC 7-2(1997) Part 1, and ASTM E2074-04, Standard Method of Fire Tests of Door Assemblies (Positive Pressure), and CAN/ULC S104, UL 10(b) 2009, UBC 7-2 1994, and NPFA 252 2008, "Method of Fire Tests of Door Assemblies", under negative furnace pressure.

<u>Attribute</u>	<u>Value</u>
CSI Code	08 10 00 Doors and Frames
Fire Resistance	45 Min PP Category C Proprietary Frame
Fire Resistance	60 Min PP Category C Proprietary Frame
Fire Resistance	90 Min PP Category C Proprietary Frame

Swing	Single Swing
Listed or Inspected	LISTED
Report Number	3181658COQ-004
Criteria	UBC 7-2 (1997)
Criteria	UBC 7-2 (1994)
Criteria	CAN / ULC S104 1980 (R1985)
Criteria	ASTM E2074 (2004)
Criteria	NFPA 252 (2008)
Criteria	UL 10(b) (2009)
Criteria	UL 10(c) (2009)
Intertek Services	Certification
Listing Section	CATEGORY C - PROPRIETARY FRAMES
Test Original Issue Date	3181658COQ-004 Sept. 2009

MACHINING INFORMATION

Product Covered

Listed Product - FyreWerks FyreFrame 90 Minute Fire Rated Door Frame

Product Description

Category C "Proprietary Frame" - Intumescent/Wood door frame for installation in 90 minute locations in steel/wood stud, drywall or masonry openings. Category A, Category B or Neutral Pressure fire rated wood/composite doors may be used. Category G Edge Sealing System is not required.

Ratings

90 Minute rated PP

Maximum Sizes

Single Swing: 48" wide x 96" high

Design Limitations

Minimum Frame Leg Width = 4-5/8"

Maximum Frame Leg Width = Equivalent to wall thickness

Minimum Frame Leg Thickness = 3/4" (-1/16")

Minimum Rabbet for Door = 1-7/8" (-1/16")

Minimum Stop Height = 1/2"

Minimum Stop Width = 1-1/4" (-1/8")

Stops - Single Rabbet or Double Rabbet (applied: flat laminated or "T" Stop).

Material: Solid wood with minimum density of 18 pounds per cubic foot density or veneer wrapped MDF.

Stops to be applied with finishing nails 12" on center. Stops may be field applied to ensure proper fit with fire door.

Casing

5/16" x 1-1/2" softwood.

Casing may be adhered to the frame leg and or the wall with nails, screws, staples or adhesives approved for substrates used in this type of application.

Hinges and Strike Plates

All hinges and applicable hardware must be fire rated for use in openings at or above the fire rating of the Frame System being installed. All hinges must be installed per NFPA 80 instructions.

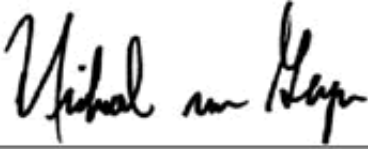
Preparation for all hinges shall be made in accordance with NFPA 80, Table 2-4.3.1 and the hinge manufacturer's installation instructions and templates. All strike plate and latch bolt receiver areas shall be prepared in accordance with the NFPA 80 and the manufacturer's installation instructions and templates.

Installation Instructions

See Attached PDF copy of Installation Instructions.

SIGNATURE PAGE

Reported By:



Michael van Geyn, A.Sc.T.
Manager – Fire Testing & Technical Programs
Building Products Division

Reviewed By:



Greg Philp
Fire Laboratory Supervisor
Construction Products Division

DRAWING INDEX

Installation Instructions

Installation Instructions

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COMPONENTS

Listing Report General Information

LISTING REPORT GENERAL INFORMATION

The Applicant have agreed to produce, test and label Intertek Listed products in accordance with the requirements of this Report. The Applicant has also agreed to notify Intertek and request authorization prior to using alternate parts, components or materials.

INSTRUCTIONS FOR USE

- One copy of this Report is submitted to the Applicant and used by the Intertek Field Representative for Follow-up Service Inspections; and
- One copy is retained in files at the Intertek Regional Certification Center.

The Applicant is to use this Report as a guide for the operation of the certification program, and will manufacture the Listed product(s) in accordance with the specifications information stated herein.

The Intertek Field Representative shall determine that the product is manufactured in accordance with this Report and that certification procedures are followed.

In the case where a discrepancy exists between the product and this Report, this Report will be considered correct, and therefore the Applicant has the responsibility for making the necessary corrections so that the product will meet the specifications stated herein.

COMPONENTS

Components used shall be those itemized in this Intertek Report covering the product, including any amendments and/or revisions.

CERTIFICATION MARK

The Intertek Certification Mark applied to the products shall either be separable in form, such as labels purchased from Intertek, or on a product nameplate or other media only as specifically authorized by Intertek. Use of the Intertek Certification Mark is subject to the control of Intertek.

MANUFACTURING AND PRODUCTION TESTS

Manufacturing and Production Tests shall be performed as required in this Report.

FOLLOW-UP SERVICE

Periodic unannounced Follow-up Service Inspections of the manufacturing facility shall be conducted by Intertek. A Follow-up Service Inspection Report shall be issued after each visit. Special attention will be given to the following:

1. Conformance of the manufactured product to the descriptions in this Report.
2. Conformance of the use of the Intertek Certification Mark with the requirements of this Report and the Intertek Certification Agreement.
3. In-plant quality control procedures and personnel.
4. Manufacturing processes and changes.
5. Performance of specified manufacturing and production tests.

In the event that the Intertek Field Representative identifies variance(s) to any provision of this Report, the Applicant shall take one or more of the following actions:

1. Correct the non-conformance.
2. Remove the Intertek Certification Mark from non-conforming product.
3. Contact the Intertek office that issued this Report for additional instructions.

GENERAL REQUIREMENTS AND DEFINITIONS

Accepted - Accepted by Intertek. All inquiries regarding change to Listed products must be presented to Intertek in writing for consideration and acceptance.

Authorized - Authorized by Intertek. All inquiries regarding change to Listed products must be presented to Intertek in writing for consideration and approval.

C.S.A. - Canadian Standards Association.

Certified - Equipment or material included in a list published by a nationally recognized certification agency that conducts periodic inspections of production of Listed equipment or materials and whose listing stated either that the equipment or material meets recognized standards or has been tested and found suitable for use in a specified manner.

Construction Details - For specific construction details, reference should be made to the following photographs and descriptions. All dimensions are approximate unless specified as exact or within a tolerance. In addition to the specific construction details described in this Report, the following general requirements may also apply as applicable.

Discrepancy - A difference between this Report and a product described in this Report. This will result in the filing of a Variance Report on which a management level decision for the corrective action will be based.

Installation, Operating and Safety Instructions - Instructions for installation and use of this product are provided by the Manufacturer as required by the standard.

Listed - Equipment or materials included in a list published by a nationally recognized certification agency that conducts periodic inspections of production of listed equipment of materials, and whose listing states either that the equipment or materials meets nationally recognized standards, or has been tested and found suitable for use in a specified manner.

Listed Component - Identifies any product covered under the Listing or Certification service of an NRTL (US) or a CO (Canada).

Markings - The Intertek Certification Mark shall be visible after installation. Other markings may be required as identified in this Report. If evaluated to a Canadian standard, the products may be required to have markings in both French and English. If so, it is the responsibility of the Applicant to determine any such requirement and provide bilingual markings, where applicable, in accordance with the Provincial Regulatory Authorities.

N.F.P.A. - National Fire Protection Association.

Production Test Requirements - When applicable, the Manufacturer shall have the necessary test facilities to carry out production tests on the Listed product.

Products - The product as described under "Authorization to Mark" is eligible to carry the Intertek Certification Mark.

Recognized Component - Identifies any component, part or sub-assembly, covered under the recognition service of an NRTL (US) or a CO (Canada), and intended for use in Intertek Listed, Intertek Classified, or Intertek Recognized products.

Records - Records of the use of the Intertek Certification Mark must be maintained by the Applicant and must be available for review during normal business hours.

Shipping - As practically as possible, each Listed product is to be shipped completely assembled and incorporate the necessary safety and installation instructions.

Standards - The Manufacturer shall have in his possession all the current standards/specifications for the Listed product.

U.L. - Underwriters Laboratories Inc.

ULC - Underwriters' Laboratories of Canada.

Unlisted Component – Because unlisted components are uncontrolled, and they do not fall under a third party follow up program, ITS may require these components to be tested and/or evaluated at least once annually, more often for certain components, as part of the independent certification process.

Use of Mark - The Components containing the Intertek Certification Mark (i.e. ink stamps, labels) must be kept in a secure area, preferably locked and must not leave the designated manufacturing plant(s) location(s) unless authorized by Intertek. Records on the use of the mark are to be maintained up-to-date. The Intertek Certification Mark and associated product identification must be clearly visible and legible when applied to the finished product. Products to be marked must have successfully passed the production tests and scrutiny of the quality control personnel, determining that the product complies with the specifications stated in this Report. Failure to comply with procedures constitutes ground for withdrawal of Intertek authorization to use the Intertek Certification Mark.

Ordering Labels - It is the responsibility of the Applicant to ensure that an adequate stock of labels is maintained. Label quantities in stock are indicated on all packing slips issued by Intertek.

Modification Procedure - Intertek may approve modifications of a product based on an additional

evaluation or tests. Fees are charged for this service. If modifications are desired, such as substituting a different material, changing the cosmetic appearance, changing the rating, altering a component to simplify the manufacturing or improve the product, or any other change, the following procedure must be followed:

1. Write the Intertek office that issued this Report requesting an evaluation of the modification required. Include a clear description and detailed drawings if required showing exactly what is involved, and state your reason for wanting to make the modifications.
2. Wait until written authorization is received from Intertek complete with additional or revised pages to be inserted into your Report. Only after written authorization is received may the Applicant proceed with the modification.

INITIAL FACTORY AUDIT

Purpose - The purpose of this audit is to ensure the following:

1. The Plant Manager, Foreman and Quality Control Personnel are familiar with this Report.
2. The Plant Quality Control Program will assure that the product is manufactured to the requirements in this Report.
3. Key personnel are familiar with and recognize the need for Follow-up Service Inspections as well as proper handling of the Intertek Certification Mark and the use of log sheets, where applicable.
4. The duties of the Controller of the Intertek Certification Mark are properly understood.

Equipment or Supplies Needed

1. Applicable Specifications.
2. Applicable Standards.
3. Supply of log sheets where applicable.
4. Intertek Certification Mark Controller instruction sheet with sample log sheet.
5. Supply of open stock/custom labels or stamp, etc.

Initial Factory Audit Procedures - The initial inspection (pre-arranged with date and time agreeable to both the Applicant and the Intertek Field Representative) will consist of an initial meeting with the Plant Manager, Plant Foreman, Quality Control Manager and other key personnel. The initial meeting will cover a complete review of the Report and production facilities.

INTERTEK FOLLOW-UP SERVICE INSPECTIONS

The Intertek Field Representative shall determine that the product is manufactured in accordance with this Report, and that label procedures are followed.

Label Control - Record serial numbers of labels if applicable, in the plant. Inspect label log sheets. The following information should be recorded in the label log sheets by the manufacturer:

1. Label numbers, date labeled or shipped, product labeled, and destination.
2. Labels removed from, returned, freight damage, or rejected products should be picked up.

Examination of Product - At each Follow-up Service Inspection the Intertek Field Representative shall determine that the product which is intended to bear the Intertek Certification Mark is manufactured in accordance with the specified standards as per the test program and stated herein. The Intertek Field Representative shall pay special attention to the following:

1. Materials used must be free from defects that could affect the performance of the product.
2. Suitable protective packaging.
3. Complete safety and installation instructions are supplied with each product. No modification to these instructions shall be made without Intertek authorization.

Examination of Applicant's Inspection Programs - At each Follow-up Service Inspection, the Intertek Field Representative shall determine that the Applicant's methods of inspection conform to the specifications included in the quality control procedures. The Intertek Field Representative will pay attention to:

1. The Applicant's quality control report is complete and conforms to the procedure accepted by Intertek and included in this Report.
2. The equipment used for inspection conforms to the specification in the quality control procedure. The work area is suitable for a good quality control program.
3. Regular manufacturing production line tests are carried out by the Applicant.

Discrepancies - The Intertek Field Representative shall complete his Follow-up Service Inspection sheet detailing the discrepancy and issue a Variance Report. A signature on the Intertek Field Representative's copy shall be obtained from the Applicant's representative, giving evidence that they were issued a copy. Copies shall be forwarded to the Intertek Regional Certification Office.

The Intertek Field Representative shall require that the Applicant remove the Intertek Certification Mark from all products which do not meet the conformance requirements of this Report, and advise the Applicant not to use the Intertek Certification Mark until further advised.

In the case of minor cosmetic changes the Intertek Field Representative will note the variance on his Follow-up Services Inspection Report and determine the action to be taken by the Applicant. Actions may be to have the Applicant apply to Intertek for an evaluation of the variance and if approved, the subsequent modification of this Report, or to have the Applicant agree to correct the variance on all affected units.

On subsequent routine Follow-up Service Inspections, the Intertek Field Representative will pay special attention to any variances listed in previous Follow-up Inspection Reports. If it is found that a variance has not been corrected as agreed to by the Applicant, the Intertek Field Representative will contact Intertek Regional Certification Center for appropriate instructions. In extreme cases, service could be immediately suspended.

In the case of a difference existing between this Report and the product that could result in a safety hazard, the Intertek Field Representative will fill out a Variance Report. The determination of what constitutes a variance is left to the discretion of the Intertek Field Representative, but any modification or change that could affect the operating characteristics of a product must be reported. The action taken by Intertek will be:

1. Removal of all labels or the Intertek Certification Mark or halting the shipping of the affected

product until the Applicant corrects the variance, or has an evaluation carried out by Intertek, the modification approved, and this Report updated.

2. For units already shipped, procedures must be taken per Intertek SOP 7.14.2.

Pre-Machining Inspection (for Fire Doors & Frames)

Before commencing work, a Machiner shall visually inspect the product for certification marking(s) which shall be at a minimum:

- Intertek WH Recognized Component Mark [1] without Country Identifiers or
- Intertek WHI Certification Mark with Country Identifiers.
- Product Designation including name/model [2]
- Rating (if a product is eligible for multiple ratings of the same type, for example 20 minute and 45 minute fire resistance rating, only one rating may be applied to the product at any time)
- Control Number [3] or Manufacturer's Name [4]

OPTIONAL:

- Date of manufacture (month/year only)
- Positive Pressure designation
- Category designation for Positive Pressure – ex. "Cat. C"

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- [1] If space or size do not permit the reproduction of the Intertek name, it may be omitted.
[2] The Product Designation must be sufficient to identify the product's manufacturing Listing Report.
[3] Control Number = Applicant's Account Number or previous Intertek Client Number.
[4] If multiple plants, then location or a location code shall be marked on the product.

WH Labeling - Fire Door Frame - US & Canada

LABELING REQUIREMENTS FOR PRODUCTS BEARING THE WHI CERTIFICATION MARK

FIRE DOOR FRAMES - US and Canada

REQUIRED ITEMS:

- WHI Certification Mark [1] with Country Identifiers [2]
- The word "LISTED"
- The product category "FIRE DOOR FRAME", "FIRE DOOR FRAME WITH TRANSOM AND/OR SIDELITE", OR "FIRE DOOR FRAME WITH TRANSOM AND/OR SIDE PANEL"
- Product Designation including name/model [3]
- If less than 3 hour fire rating, Fire Protection Rating (if a product is eligible for multiple ratings of the same type, for example 20 minute and 45 minute fire resistance rating, only one rating may be applied to the product at any time) [4]
- For all non-3-sided, ANSI A155.1 (UL 63) frames, the Serial Number [5] or Date Code

- Control Number [6] or Listee's Name [7]
- The words "DO NOT REMOVE OR COVER THIS LABEL" [8] (Optional for Stamped or Embossed Frames)
- The words "SEE INSTALLATION INSTRUCTIONS" [9]

OTHER ITEMS: [10]



- POSITIVE PRESSURE statement:


Positive Pressure information is not required on frames. However, if Positive Pressure labeling is required, the following is required.

Required: The words "MEETS UBC 7-2-97 / UL 10C" or "MEETS UBC 7-2-97" or "MEETS UL 10C"

Optional: "POSITIVE PRESSURE"

- SMOKE AND DRAFT CONTROL statement:

The  mark is not required on frames. However if the  mark is desired, then the label shall provide the required positive pressure statements (see Positive Pressure requirements above).

If the  mark is applied, it is recommended that the additional language "SMOKE AND DRAFT CONTROL RATING REQUIRES A LISTED GASKET." be included.

- WITHOUT HOSE STREAM

For doors not meeting hose stream test requirements, then the label will state "20 MINUTE WITHOUT HOSE STREAM" [11]

Note: Refer to the attached diagram for example of the Mark

- [1] If space or size do not permit the reproduction of the Intertek and/or Warnock Hersey name, it may be omitted.
- [2] "C" for Canada and "US" for United States. For doors both identifiers may be used except when the doors are 20 Minute Without Hose Stream. Then the "US" identifier only shall be used.
- [3] The Product Designation must be sufficient to identify the product's manufacturing Listing Report.
- [4] Optional for 3 hour or greater rating (if a product is eligible for multiple ratings of the same type, for example 20 minute and 45 minute fire resistance rating, only one rating may be applied to the product at any time)
- [5] For open stock labels, the serial number is unique and therefore also satisfies the requirement for a control number or listee's name.
- [6] Control Number = Listee's Oracle Client Number or previous Intertek Client Number.
- [7] If multiple plants, then location or location code shall be noted on label.
- [8] Not applicable for embossed or stamped frames.
- [9] Not applicable for embossed or stamped frames.
- [10] Depending on code requirements or test results, some additional labeling information will be required
- [11] This shall be verified by the test report and the Listing Report. When the doors are 20 Minute Without

Hose Stream. Then the "US" identifier only shall be used.

ADDITIONAL REQUIREMENTS DRAWING INDEX

WHI Certification Mark - US & Canada

WHI Certification Mark - US & Canada

LISTED CERTIFICATION MARK



"C & US" - MEETS US & CANADIAN STANDARDS

DESIGNATES LISTED PRODUCTS "WITH HOSE STREAM"