



**Intertek Testing Services**  
ETL SEMKO

**MANUFACTURING SPECIFICATIONS**

FOR

FERCHE MILLWORK, INC.  
P.O. BOX 39  
RICE, MINNESOTA 56367

**FERCHE 20 MINUTE WOOD FIRE DOOR FRAME**

REPORT NUMBERS:

13153 – 764 (September 20, 1995)  
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ANY CHANGES OR MODIFICATIONS OF THIS SPECIFICATION MUST BE APPROVED BY INTERTEK TESTING SERVICES IN WRITING.

ANY DEVIATIONS FROM THIS SPECIFICATION WILL BE CAUSE FOR REJECTION OF THE FIRE DOOR FRAME.

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**SIZE**

Maximum Height	8'-0"
Maximum Width	8'-0"
Minimum Jamb Depth	3-3/4"

Note: Frames for communicating doors allowed; minimum Jamb Depth of 5-1/4". Refer to Figure 3.

**MINIMUM DIMENSIONS**

Jamb Thickness	3/4"
Stop Depth	1/2"
Applied Stop Width	1-1/2"
Groove for Applied "T" Stop	<u>5/8"</u> wide x 3/16" deep (full length of jamb or header)

Note: The tongue for the applied stop shall not be less than 1/2" wide x 1/8" deep.

Refer to Figures 1 and 2.

**MATERIALS**

**Jambs/Header Cross Section** (Refer to Figure 1)

Veneer face glued to particleboard core or solid wood core with edgebanding.

Core	Particleboard to be minimum 45 p.c.f. (pounds per cubic foot) density.
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OR

Solid wood with a minimum Specific Gravity (S.G.) = 0.38 at 12% Moisture Content (M.C.). Finger joints optional for end joints of solid wood pieces.

Edgebanding	Solid wood with a minimum S.G. = 0.40 at 12% M.C. Solid piece or finger jointed with a minimum distance of 8" on center between finger joints. Minimum thickness = 3/16"
Veneer	Solid Wood with a minimum S.G. = 0.40 at 12% M.C. Minimum thickness = 1/32"
Applied "T" Stop	Solid wood with a minimum S.G. = 0.40 at 12% M.C.

**Alternative Jamb/Header Cross-Section (Refer to Figure 1)**

Solid wood with a minimum S.G. = 0.35 at 12% M.C. *Finger Joints not allowed.*

**Alternative Jamb/Header Cross-Section (Refer to Figure 2)**

Single rabbet frame (with optional kerf) manufactured with solid wood.

Material	Solid piece of wood with a minimum S.G. = <u>0.35</u> at 12% M.C. <i>Finger Joints not allowed.</i>
Minimum Jamb Depth	3-3/4"
Minimum Thickness	1-3/8" (- 1/16"); Rabbet: 3/4"
Stop Height	1/2"
Optional Kerf	1/8" by 1/2"

**ADHESIVES**

National Starch & Chemical Kor-Lock 42-3006 (veneer to particleboard; edgeband to particleboard).

Note: Spread rate and press times are as per adhesive manufacturer's instructions.

## **HARDWARE PREPARATION**

Preparation shall be made in accordance with NFPA 80, Para. 1-3.4. Only hardware listed for use with 20-minute fire door assemblies may be installed.

Strike	As per NFPA 80 and hardware installation instructions.
Hinges	Listed hinges per NFPA 80 and hinge installation instructions.

## **CASING**

Material	Solid wood of any shape with a minimum S.G. = 0.40 at 12% M.C.
Minimum Thickness	1/4"
Minimum Width	1-1/2"

## **INSTALLATION INSTRUCTIONS**

Installation instructions for frames shall include at least the following information:

1. Maximum height and width allowed.
2. Maximum space allowed between frame and buck stud, and fiberglass insulation requirements (1/8" without insulation; 1/4" with insulation).
3. Type and size of fasteners with maximum spacing and attachment methods. (Jamb installation: 10d nails in pairs; 24" o.c.) (Stop installation: 16 gauge staples or 1-1/4" brads and field nailed with 6d nails, minimum of 2" from ends and 12" o.c.).

Refer to Figure 4.

## **MARKINGS**

### **WH Further Processing Marks:**

Each unmachined fire door frame eligible for a certification label shall have the following stamped identification on the back of each component of the door frame:


1. Specification Identification (Ferche Millwork) and XX (for 20 Minutes)
2. Manufacturer's Name
3. WH registered logo.

In addition the date (month/year) of manufacture shall be stamped on frame.

Example:

FERCHE MILLWORK XX MFG Name **WH**  
JUNE 2001

### **WHI Certification Labels:**

When all machining has been completed on the fire door frame, the Warnock Hersey () certification label may be applied within the top 1/3 of hinge jamb. The certification label shall be applied with screw-type nails (minimum length of 5/8" (15.9 mm), or minimum 18 gauge staples with 1/4" (6.4 mm) crown and 5/8" (15.9 mm) length). *[Note: If staples are used, two staples (one at each end of the label) shall be applied parallel to the edge of the label.]*

Exception: When a continuous type hinge is applied to the fire door assembly, the WH certification label shall be attached to the header of the door frame.

The certification label shall contain (at a minimum):

1. The words, "Listed Fire Door Frame"
2. Fire Rating: 20 Minutes
3. Serial Number
4. The words, "Do not remove or cover this label"
5. The licensee's name, city, and state

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Figure 1: Frame Components

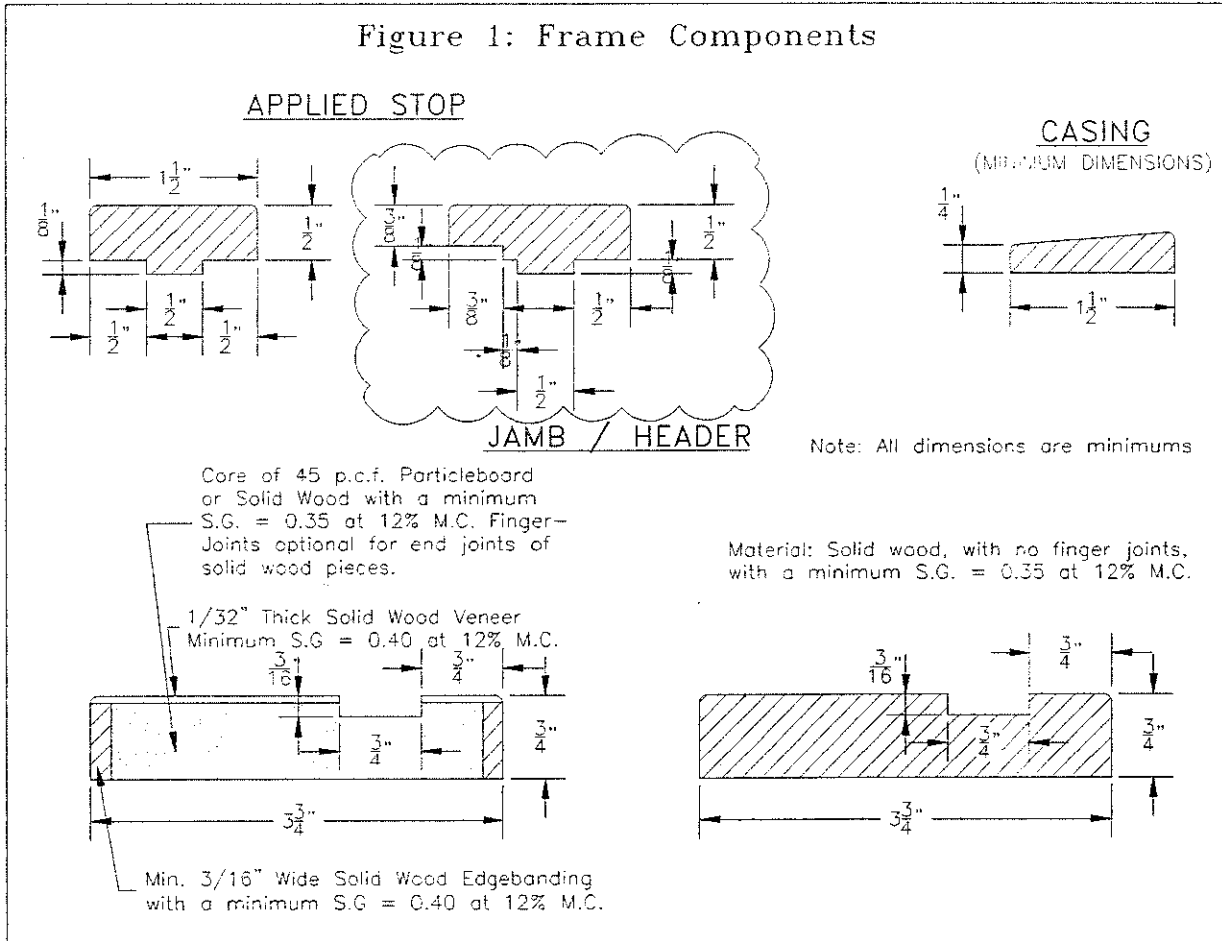
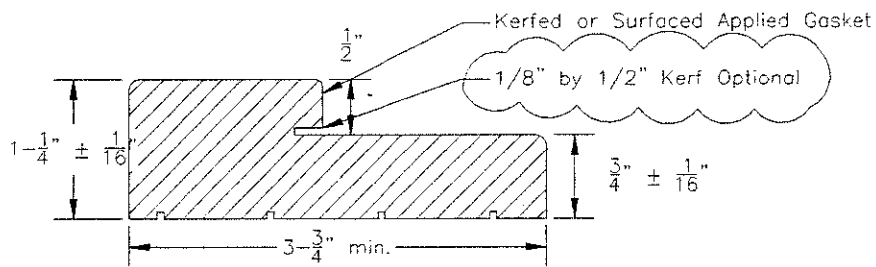


Figure 2: Alternative Frame Cross-Section



MATERIAL: SOLID WOOD WITH A MINIMUM S.G. = 0.35 AT 12% M.C.

Figure 3: Frames for Communicating Doors

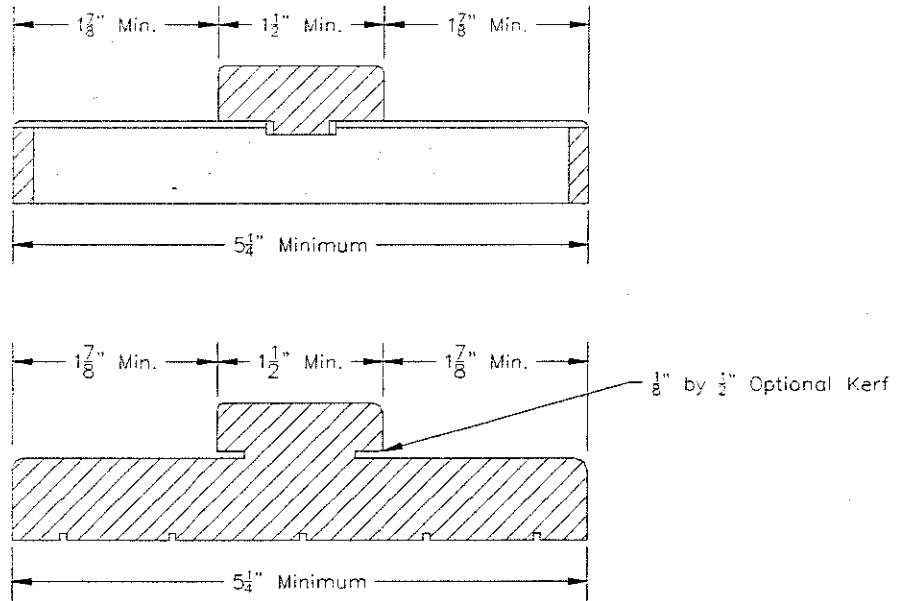


Figure 4: Installation Instructions

## Installation Instructions

for the  
**20 Minute  
frame**

a  
**Door Frame &  
Sidelight Frame**

Manufactured by  
**Ferche Millwork**  
Listed by  
**Warnock Hersey**



## General Specifications

### Door Jamb

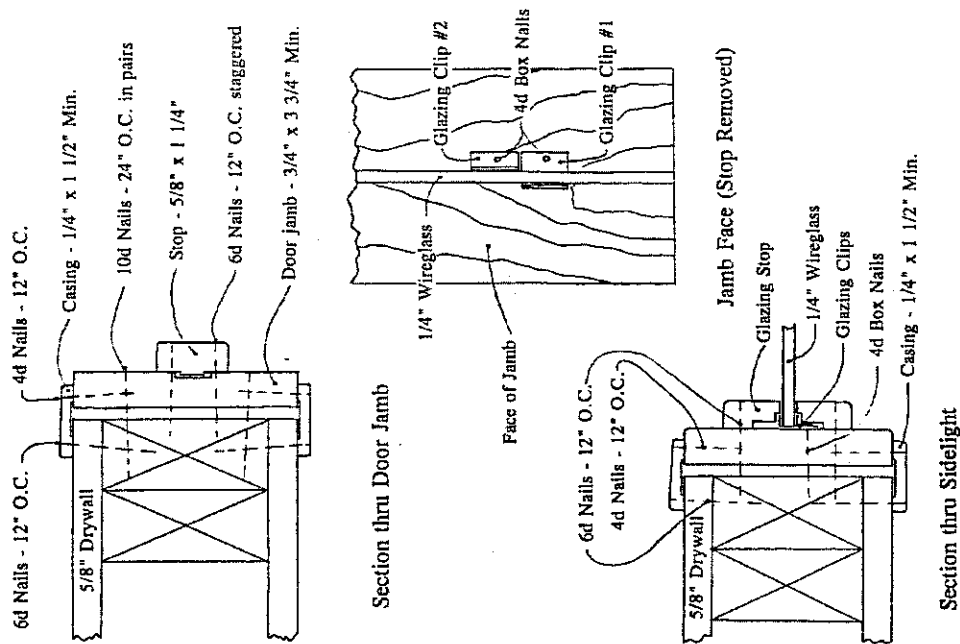
Maximum Door Size - 8'0" x 8'0"  
Jamb Thickness - 3/4"  
Minimum Jamb Width - 3 3/4"  
Stop - 5/8" x 1 1/2"  
Casing - 1/4" x 1 1/2" (min.)

### Sidelight/Borrowed Lite

Maximum window size - 4'0" x 8'0"  
Jamb Thickness - 3/4"  
Minimum Jamb Width - 3 3/4"  
Stop - 5/8" x 1 1/4"  
Casing - 1/4" x 1 1/2" (min.)  
Glazing Clips - 26 ga. galvanized steel  
Glazing Compound - Silicone caulk or Tremco #440  
glazing tape

Approved wood species for face veneer and edge strips - oak, cherry, mahogany, maple, poplar or any hardwood as dense or denser than poplar.

# Illustrations



## 20 Minute Door Frame Installation

- Rough Opening** - The maximum allowable gap between back of jamb and the framing member is 1/4". Example of opening size: a 3' 0" x 7' 0" door (85" below dado) requires a rough opening of 38" x 86".
- Jamb Header/Side Assembly** - Sides attach to header with 3-6d nails or 3 #8 x 2" screws.
- Jamb Attachment** - Fasten frame to studs with 10d nails in pairs at a maximum of 24" O.C. Place wood shims behind the nails.
- Stop Attachment** - Shop assembled with 16 ga. staples or 1 1/4" brads. Field nail with 6d nails at 12" O.C., minimum of 2" from end. T-stop can be adjusted 1/4" within plough.
- Shim Space** - Any space between back of jamb and framing material which is greater than 1/4" must be filled with fiberglass.
- Casing** - Casing is nailed to jamb with 4d nails and nailed to structural member with 6d nails. Space nails at 12" O.C.
- Hinge Attachment** - Each hinge and strike will be attached to the jamb with one of the hinge screws having a minimum length of 3". Place shim behind each hinge and strike location.
- Gasketing** - Gasket shall be installed and applied in accordance with NFPA 80.

## 20 Minute Sidelight Frame Installation

- Rough Opening** - Finished opening to be 1/4" greater in height and width than wireglass. The maximum allowable gap between back of frame and the framing member is 1/4".
- Frame Assembly** - Sides of frame to be dadoed to accept top and bottom of frame. Assemble with 3 - 6d nails or 3 - #8 x 2" screws.
- Frame Attachment** - Fasten frame to studs with 10d nails in pairs at a maximum of 24" O.C. Place wood shims behind the nails.
- Stop Attachment/Glazing Assembly** - Glazing will be held in place with wood-stops as well as Ferche glazing clips. Install stop around inside of opening with 6d nails at 12" O.C. Position glazing clip (the one with the longer leg) against stop and fasten to frame with a 4d nail. Clips to be located within 6" of the corners and no more than 12" apart. Minimum of 2 clip sets per side. Place a bead of silicone caulking or a strip of Tencor #440 glazing tape against stop. Place 1/8" thick neoprene setting blocks at the quarter points of the bottom frame member. Insert wireglass into frame. Position glazing clips (the clips with the shorter leg) next to the previously attached clips and fasten to the frame with 4d nails. Apply silicone or glazing tape, position wood stop and nail with 4d nails as before.
- Shim Space** - Any space greater than 1/8" between back of frame and structural member must be filled with fiberglass.
- Casing** - Casing is nailed to frame with 4d nails and nailed to structural member with 6d nails. Space nails at 12" O.C.