CERTIFICATE OF COMPLIANCE

 Certificate Number
 20150129-R25758

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 R25758-20150129

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 2015-JANUARY-29

Issued to: PCJ INDUSTRIES CO LTD

199/24-25 VIBHAVADEERANGSIT RD

SAMSENNAI

PAYATHAI 10400 THAILAND

This is to certify that FIRE DOOR AND WINDOW FRAMES representative samples of The single-unit type pressed-steel frame.

The single-unit type, pressed-steel frames for masonry

walls at least 2 inches (50.8 mm) thickness.

Have been investigated by UL in accordance with the

Standard(s) indicated on this Certificate.

Standard(s) for Safety: ANSI/UL 10B - Fire Tests of Door Assemblies

ANSI/UL10C - Positive Pressure Fire Tests Of Door

Assemblies

CAN/ULC-S104 - Standard Method for Fire Tests of Door

Assemblies

Additional Information: See the UL Online Certifications Directory at

www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Assistant Chief Engineer, Global Inspection and Field Services

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Fire Door and Fire Window Frames

See General Information for Fire Door and Fire Window Frames

PCJ INDUSTRIES CO LTD R25758

199/24-25 VIBHAVADEERANGSIT RD SAMSENNAT PAYATHAI, BANGKOK 10400 THAILAND

Door Frames for use as a component in fire door assemblies that meet the requirements of UL 10C, (positive pressure):

Three-sided or four-sided steel frame with transoms (welded, single swing; knockdown, pairs). These frames are also suitable for use in smoke door applications when used with Classified Swinging Type Fire Doors, Positive Pressure Tested (GSZN) bearing the "S" mark on the Classification Marking and Category H Smoke and Draft Control Gasketing. See Gasketing Materials for Fire Doors, Positive Pressure Tested (GVYI) for listings of Category H smoke and draft control gaskets.

Three-sided or four-sided steel frames without transom bars (single swing, pairs).

Steel frames with lights. Requires Glazing Materials Classified as components in fire door assemblies complying with UL 10C. See Glazing Materials (KCMZ) for a list of glazing materials. These frames are also suitable for use in smoke door applications when used with Classified Swinging Type Fire Doors, Positive Pressure Tested (GSZN) bearing the "S" mark on the Classification Marking and Category H Smoke and Draft Control Gasketing. See Gasketing Materials for Fire Doors, Positive Pressure Tested (GVYI) for listings of Category H smoke and draft control gaskets. These frames are also suitable for use in smoke door applications when used with Classified Swinging Type Fire Doors, Positive Pressure Tested (GSZN) bearing the "S" mark on the Classification Marking and Category H Smoke and Draft Control Gasketing. See Gasketing Materials for Fire Doors, Positive Pressure Tested (GVYI) for listings of Category H smoke and draft control gaskets.

Door Frames for use as a component in fire door assemblies that meet the requirements of UL10B (neutral pressure):

Three or four-sided sided frames with transom bars (single swing, welded; knockdown, pairs).

Three-sided or four-sided steel frames without transom bars (single swing, pairs).

Frames with lights. Requires Glazing Materials Classified as components in fire door assemblies complying with UL 10B and/or UL 10C. See Glazing Materials (KCMZ) for a list of glazing materials.

Transom panel frames with transom bars. For use with Listed transom panels.

Classic Steel . Trademark and/or Tradename:

Last Updated on 2015-02-12

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[Fire Doors] Fire Door and Fire Window Frames

See General Information for Fire Doors

GENERAL

This category covers fire door frames, fire window frames, and 20-minute-type door frames or window frames fire tested without hose stream. These frames are intended for installation in conjunction with fire doors, hardware, glazing and/or other accessories that together form a fire door assembly or fire window assembly, which provides the degree of fire protection to the opening.

Fire door and fire window frames are intended for the protection of openings in walls when installed in accordance with ANSI/NFPA 80, "Fire Doors and Other Opening Protectives," and ANSI/SDI A250.11, "Recommended Erection Instructions for Steel Frames." Installation instructions are not required to be shipped with frames that are to be installed in accordance with ANSI/NFPA 80 and ANSI/SDI A250.11. Installation details other than those specified in ANSI/NFPA 80 and ANSI/SDI A250.11 are shipped with the frames. Elevator door frames, wood frames and other special-use frames as identified in the individual certifications are intended for installation only in walls of the types shown in the installation instructions accompanying the door or window frame.

20-minute-type door frames fire tested without hose stream are intended for use with 20-minute-type door assemblies fire tested without hose stream. 20-minute-type door and window assemblies fire tested without hose stream are intended for the protection of openings in walls and partitions as specified in the applicable sections of one or more model building codes. The 20-minute rating indicates the duration of fire exposure only. These 20-minute door and window frame assembly types have not been subjected to a hose stream exposure.

Authorities Having Jurisdiction should be consulted as to the particular requirements covering the installation and use of these products.

GLAZING MATERIALS

Glazing materials referenced in this category are certified as to fire resistance only. The glazing materials are intended to be installed in the fire doors in accordance with ANSI/NFPA 80 and the installation instructions provided by the manufacturer of the door, glass light frame or glazing material; see Fire-protection-rated Glazing Materials (KCMZ).

DOOR FRAMES

Door frames bearing a UL Certification Mark without an hourly rating are intended (when provided with the required wall anchors) for installation in designated fire-rated walls.

Door frames bearing a UL Certification Mark without an hourly rating and provided with masonry wall anchors can be used in conjunction with fire doors rated up to 3 h and installed in masonry walls having fire-resistance ratings not less than the rating of the door.

Door frames bearing a UL Certification Mark without an hourly rating and provided with steel stud or wood stud anchors can be used in conjunction with fire doors rated up to 1-1/2 h and installed in steel stud and wood stud walls, steel stud cavity walls, steel stud shaft walls and wood stud cavity walls protected with gypsum board, having fire-resistance ratings not less than the rating of the door nor more than 2 h.

Elevator door frames, frames of the slip-on type, wood frames and other special-use frames as identified in the individual certifications are intended for installation only in the walls of the types shown in the installation instructions accompanying the door frame.

Door frames bearing a UL Certification Mark with a specific rating which are used with labeled fire doors or hardware having a lesser or greater rating will provide the degree of fire protection afforded by the lesser rating of either frame, door or hardware.

Standard door frames are of the single-unit or two-section type and consist essentially of steel head and jamb members, including hardware reinforcements, wall anchors, door stops, and provisions for anchoring to the floor.

Door frames may be provided with mullions, transom panels or transom lights. In addition to the steel head and jamb members, these frames are equipped with a steel mullion, transom bar, steel-covered composite transom panel, and glazing beads. Transom panel frames of standard construction are intended for use with doors rated up to and including 1-1/2 h. Transom light frames glazed with labeled glazing material are intended for use with doors rated a maximum of 3/4 h.

Some manufacturers can provide labeled transom panel frames for use with doors rated up to and including 3 h as indicated in the individual certifications. Some manufacturers can provide labeled transom frames with hollow-metal transom panels with or without a transom bar. Transoms of solid construction are intended for use with doors rated up to and including 1-1/2 h (unless otherwise noted for 3 h in the individual certifications). Some manufacturers can provide labeled door frames with side panels or sidelights. Frames with side panels are intended for use with doors rated up to and including 1-1/2 h. Frames with sidelights glazed with labeled glazing material are intended for use with doors rated a max of 3/4 h.

Special frames are constructed of materials other than steel and are intended for use with doors rated less than 3 h. The hourly ratings for special frames are shown in the individual certifications.

Some special frames are intended for use with certified fire doors and certified transom panels of a specific design. These frames and the labeled components are identified in the individual certifications.

Double-egress frames are intended for use with double-egress-door designs as identified in the individual certifications.

Elevator door frames are intended for use with sliding freight or passenger elevator fire door designs for use in drywall or masonry shaft construction, as identified in the individual certifications for door frames.

Freight elevator, passenger elevator and swing-type fire door frames incorporating transom panels exceeding the heights eligible for certifications and which have not been subjected to standard fire tests can be provided with a Certificate for Oversized Frame Assemblies that are otherwise found to be in compliance (except for size) with all requirements for design, materials and construction. These oversized frame assemblies are intended for use with specific certified freight elevator fire doors, passenger elevator fire doors, or swing-type fire doors.

Authorities Having Jurisdiction should be consulted as to whether the assembly is acceptable for a specific location. The Oversize Certificate can be a separate certificate or a label certificate affixed to the assembly.

20-minute-type door frames may be provided with sidelights and/or transom lights as indicated in the individual certifications.

Standard 20-minute-type door frames are of the single-unit pressed-steel type and consist essentially of steel head and jamb members, including hardware reinforcements, wall anchors, door stops and provisions for anchoring to the floor.

A 20-minute-type door frame with a transom and/or sidelight prepared at the factory for the glazing material does not normally include the glazing material itself. These frames should be glazed with certified glazing material; see Fire-protection-rated Glazing Materials (KCMZ).

POSITIVE-PRESSURE FRAMES

All three-sided hollow-metal frames, manufactured from 18 gauge or heavier steel and properly anchored, comply with the positive-pressuretest requirements. UL does not require that these frames be marked for compliance with positive pressure. Every steel frame manufacturer referenced herein is eligible to produce hollow-metal frames for compliance to positive pressure. Some manufacturers have opted to mark their frames for conformity to positive pressure as noted below.

Three-sided steel frames comply with the positive-pressure-test requirements of <u>ANSI/UL 10C</u>. The frame label reads as follows (several options available): "Listed Fire Door Frame" or "Listed Fire Door Frame" and "UL 10C." A supplemental label may be used to denote conformity to ANSI/UL 10C.

Category C frames are marked for conformity to positive pressure. The required label reads as follows: "Listed Fire Door Frame" and "UL 10C." Limitations on the hourly rating (if appropriate) also appear on the label.

Frames with lights (transom or sidelight) comply with positive pressure when certain glass (glazing) and glazing compounds are used. Refer to Glazing Materials (KCMZ) for the certifications of glazing and compound combinations that have been investigated to positive pressure. The label for the frame reads as follows (several options available): "Listed Frame With Lights" or "Listed Frame With Lights" and "UL 10C." A supplemental label may be used to denote conformity to ANSI/UL 10C.

WINDOW FRAMES

Fire window frames consist of sash and mullions of various designs. Fire window frames are certified for a 3/4 h or 1 h fire rating. In addition, some window frames are certified for 20 minutes without hose stream as indicated in the individual certifications. The exposed area of individual glazing lights is limited to 1296 sq in. with no dimension to exceed 54 in. unless otherwise stated in the individual certifications.

Fire window frames are intended to be installed in masonry-type walls unless otherwise identified in the individual certifications.

Fire window frames intended to be installed in gypsum board construction and supported directly by a noncombustible floor are marked "Fire Window Frame for Installation on Noncombustible Floor with Base Anchor Provided on Frame.'

Fire window frames intended to be installed above the floor in drywall construction should be installed as specified by the installation instructions provided with the window frame.

20-minute-type window frames fire tested without hose stream cover pressed-steel window frames of the hollow-metal type.

Standard 20-minute-type window frames consist of formed steel sheet, reinforced as required, with a stationary-type single sash or with stationary-type multiple sashes.

The window frame prepared at the factory for the glazing material does not normally include the glazing material. Certified glazing material is usually provided by other than the window frame manufacturer and installed after installation of the window frame in the building.

The protection of an opening depends not only upon the use of doors or glazing of the proper type, but also upon the use of certified door or window frames, certified hardware, and other certified accessories, as needed. Authorities Having Jurisdiction should be consulted as to which door type, door frame, window frame, glazing, hardware and other certified accessories are acceptable for any given location.

POSITIVE-PRESSURE WINDOW FRAMES

Window frames may comply with positive pressure when certain glass (glazing) and glazing compounds are used. Refer to Glazing Materials (KCMZ) for the certifications of glazing and compound combinations that have been investigated to positive pressure. The label for the frame reads as follows (several options available): "Fire Window Frame" or "Fire Window Frame" and "UL 9."

CERTIFICATES

Fire window frames exceeding the height and width eligible for certification and which have not been subjected to standard fire tests can be provided with a Certificate for Oversized Frame Assemblies that are otherwise found to be in compliance (except for size) with all requirements for design, materials and construction. Authorities Having Jurisdiction should be consulted as to whether the assembly is acceptable for a specific location. The Oversize Certificate can be a separate certificate or a label certificate affixed to the assembly.

PRODUCT IDENTITY

One of the following product identities appears on the product:

FDF (in lieu of "Fire Door Frame"; to be used only when the UL Certification Mark is stamped into the fire door frame)

FDF-L (in lieu of "Fire Door Frame for Lights"; to be used only when the UL Certification Mark is stamped into the fire door frame)

FDF-P (in lieu of "Fire Door Frame with Panels"; to be used only when the UL Certification Mark is stamped into the fire door frame)

FDF-20 (in lieu of "Fire Door Frame, Fire Rating: 20 Minutes"; to be used only when the UL Certification Mark is stamped into the fire door frame)

FDF-20 NH (in lieu of "20-minute-type Door Frame Fire Tested Without Hose Stream"; to be used only when the UL Certification Mark is stamped into the fire door frame)

Fire Door Frame

Fire Door Frame for Lights

Fire Door Frame for Side and Transom Lights

Fire Door Frame for Sidelight

Fire Door Frame for Transom Light

Fire Door Frame with Panels

Fire Door Frame with Side and Transom Panels

Fire Door Frame with Side Panel

Fire Door Frame with Transom Panel

Fire Door Frame, Fire Rating: 20 Minutes

Fire Door Frame, Wood Type, Fire Rating: 20 Minutes, for Use with UL-certified Fire Doors Marked Suitable for Use with UL-certified Woodtype Fire Door Frames

Fire Door Frame, Wood Type, Fire Rating: 20 Minutes, for Use with UL-certified Wood or Plastic-covered Composite or Wood-core Doors

Fire Window Frame, Fire Rating: 1 Hr Fire Window Frame, Fire Rating: 3/4 Hr

Sheet-Metal Mullion for Nonbearing Fire Window Frames

Transom or Sidelight Panel

20-minute-type Door Frame Fire Tested Without Hose Stream

20-minute-type Door Frame for Lights Fire Tested Without Hose Stream

20-minute-type Door Frame with Panels Fire Tested Without Hose Stream

20-minute type Window Frame Fire Tested Without Hose Stream

RELATED PRODUCTS

For information on fire doors, fire windows, and related frames, hardware, glazing and other individual components, see Fire Door Assemblies and Fire Window Assemblies (GSNN).

For certifications of finishers, see Finishers of Fire Door Frames and Fire Window Frames (GVUP).

ADDITIONAL INFORMATION

For additional information, see Fire Doors (GSNV) and Fire-resistance Ratings (BXRH).

REQUIREMENTS

The basic standards used to investigate door frames in this category are ANSI/UL 10B, "Fire Tests of Door Assemblies" and ANSI/UL 10C, "Positive Pressure Fire Tests of Door Assemblies," or the requirements contained in <u>UL Subject 63</u>, "Outline of Investigation for Fire Door Frames.

The basic standard used to investigate window frames in this category is ANSI/UL 9, "Fire Tests of Window Assemblies."

Products identified as 20-minute-type door or window frames are investigated to ANSI/UL 10B or ANSI/UL 10C without the hose stream exposure described in the test method.

UL MARK

The Certification Mark of UL on the product is the only method provided by UL to identify products manufactured under its Certification and Follow-Up Service. The Certification Mark for these products includes the UL symbol, the words "CERTIFIED" and "SAFETY," the geographic identifier(s), and a file number.

Additional Certification Markings

All knocked-down fire door frame parts are marked "Knocked-down Frame Part for Certified Fire Door Frame." Also, the jamb is marked 'Certified Fire Door Frame." The markings on each part identify the certified frame parts.

All knocked-down 20-minute-type door frame parts are marked "Knocked-down Frame Part for Certified 20-minute Door Frame," in addition to the supplementary statement, "20-minute-type Door Frame Fire Tested Without Hose Stream."

All knocked-down 20-minute-type window frame parts are marked "Knocked-down Frame Part for Certified 20-minute Window Frame," in addition to the supplementary statement, "20-minute-type Window Frame Fire Tested Without Hose Stream."

Alternate UL Mark

The Listing Mark of UL on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word "LISTED," and one of the following product names as appropriate:

- "Fire Door Frame"
- "Fire Door Frame for Lights"
- "Fire Door Frame for Transom Light"
- "Fire Door Frame with Panels"
- "Fire Door Frame with Transom Panel"
- "Fire Door Frame for Sidelight"
- "Fire Door Frame with Side Panel"

- "Fire Door Frame for Side and Transom Lights"
- "Fire Door Frame with Side and Transom Panels"
- "Transom or Sidelight Panel"
- "Fire Door Frame, Fire Rating: 20 Minutes"
- "Fire Door Frame, Wood Type Fire Rating: 20 Minutes, for Use with UL Classified Wood or Plastic Covered Composite or Wood Core Doors'
- "Fire Door Frame, Wood Type, Fire Rating: 20 Minutes, for Use with UL Classified Fire Doors Marked Suitable for Use with UL Listed Wood Type Fire Door Frames"
- "Twenty Minute Type Door Frame Fire Tested Without Hose Stream," with or without the notation "Frame for Lights" or "Frame with Panels"
- "Twenty Minute Type Window Frame Fire Tested Without Hose Stream"
- "Fire Window Frame (3/4 Hr or 1 Hr) Fire Rating'
- "Sheet-Metal Mullion for Nonbearing Fire Window Frames"

When the Listing Mark of UL is stamped into the frame, one of the following abbreviated product identities may be used:

- "FDF" in lieu of "Fire Door Frame"
- "FDF-L" in lieu of "Fire Door Frame for Lights"
- "FDF-P" in lieu of "Fire Door Frame with Panels"
- "FDF-20" in lieu of "Fire Door Frame Fire Rating 20 Minutes"
- "FDF-20 NH" in lieu of "20 Minute Type Door Frame Fire Tested Without Hose Stream"

All knocked-down fire door frame parts bear the supplementary statement "Knocked-Down Frame Part for Listed Fire Door Frame." Also, the jamb bears the supplementary statement "Listed Fire Door Frame." The supplementary statement on each part identifies the Listed frame parts.

All knocked-down twenty-minute-type door or window frame parts bear the supplementary statement "Knocked-Down Frame Part for Listed Twenty Minute Door or Window Frame" in addition to the supplementary statement "Twenty Minute Type Door Frame or Window Frame Fire Tested Without Hose Stream.'

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