

ICC-ES Evaluation Report**ESR-2219**

Reissued April 1, 2013

This report is subject to renewal May 1, 2014.www.icc-es.org | (800) 423-6587 | (562) 699-0543

A Subsidiary of the International Code Council®

DIVISION: 08 00 00—DOORS AND WINDOWS
Section: 08 30 00—Specialty Doors and Frames**REPORT HOLDER:****McKEON DOOR COMPANY**
44 SAWGRASS DRIVE
BELLPORT, NEW YORK 11713
(631) 803-3000
www.mckeondoor.com**EVALUATION SUBJECT:****McKEON VERTICAL COILING FIRE DOORS WITH EGRESS DOORS: SAFESCAPE T2000 and T2000-TR, SAFESCAPE T2500 and T2500-TR, AND SAFESCAPE T5000 AND T5000-TR; McKEON VERTICAL COILING FIRE DOORS: FSFD, FSFD-IS AND FSFD-TR; McKEON SIDE COILING FIRE DOORS WITH EGRESS DOORS: SAFESCAPE S9000, S9500, S7400, S7500, S7700, AND S7900; McKEON SIDE COILING FIRE DOORS: S4000, S7200, S7600; McKEON HORIZONTAL ACCORDION FIRE DOORS WITH EGRESS DOORS: AC8400, AC8500, AC8700, AC8800 and AC8900; McKEON HORIZONTAL ACCORDION FIRE DOORS: AC8200 AND AC8600****1.0 EVALUATION SCOPE****Compliance with the following codes:**

- 2009 *International Building Code*® (2009 IBC)
- 2006 *International Building Code*® (2006 IBC)

Properties evaluated:

- Fire resistance
- Smoke and draft control
- Means of egress

2.0 USES

McKeon fire doors are fire-resistive retractable fire doors, which are recognized as fire door assemblies for protection of openings as required in Section 715 of the 2009 and 2006 IBC. Fire door assemblies can be used as smoke-and-draft control assemblies as indicated in Section 3.5 of this report. Fire door assemblies incorporating side-swinging egress doors and McKeon's Safescape Model AC8800 can be used as means of egress doors in accordance with the 2009 and 2006 IBC Section 1008, as described in Section 4.5 of this report.

3.0 DESCRIPTION**3.1 General:**

Fire door assemblies recognized in this report are either vertical-coiling, side-coiling, or horizontal sliding accordion doors. Some of the fire door assemblies incorporate side-swinging egress doors, as described in Section 3.2 of this report. The door curtains of the fire door assemblies are assembled from McKeon F-3, IS or AC interlocking galvanized or stainless steel slats. The McKeon F-3 slat profiles are minimum No. 22 gage [0.029 inch (0.737 mm) base-metal thickness], G60 designation galvanized steel, complying with ASTM A 152, or Type 304 or 316 stainless steel, with a cross section not less than 3 inches (76 mm) wide by $\frac{7}{8}$ inch (22 mm) deep. The McKeon AC slat profiles are minimum No. 18 gage [0.045 inch (1.143 mm) base-metal thickness], G60 designation galvanized steel, complying with ASTM A 152, with a cross section not less than 7 inches (178 mm) or 14 inches (356 mm) wide by $\frac{1}{2}$ inch (13 mm) deep. The McKeon IS slat profiles are minimum No. 22 gage [0.026 inch (0.66 mm) base-metal thickness], G60 designation galvanized steel, complying with ASTM A 152, with a cross section not less than $2\frac{5}{8}$ inches (67 mm) wide by $\frac{3}{4}$ inch (19 mm) deep, and have a void in the core which is filled at the factory with rockwool or Pyrocrete. See Table 1 for a summary of the McKeon fire door assembly model types.

3.1.1 Vertical-Coiling Fire Door Assemblies:

3.1.1.1 General: Vertical-coiling fire door assemblies consist of steel slats (described in Section 3.1, above), bottom bar, wall guides, barrel assembly, automatic release device, governor and counterbalance mechanism.

3.1.1.2 Safescape Models T2000, T2000-TR, T2500 and T2500-TR: The Safescape models T2000, T2000-TR, T2500 and T2500-TR are automatic resetting rolling steel fire doors with integral side-swinging egress doors. The T2000 and T2500 doors use McKeon F-3 slat profiles described in Section 3.1 of this report. The T2000-TR and T2500-TR doors use McKeon IS slat profiles filled with Pyrocrete described in Section 3.1 of this report. The door curtains coil into the area above the ceiling when in the open position. The assembly may be equipped with one or two hollow-metal steel, side-swinging egress doors that may be recessed into the wall and held in place by listed electromagnetic door holders. Safescape T2000 and T2000-TR consist of an assembly with one side-swinging egress door. The Safescape T2500 and T2500-TR consist of an assembly with two side-swinging egress doors. The listed releasing device of the listed door operator is

activated by either a listed closing device (fusible link) rated at a maximum temperature of 165°F (74°C), an approved, listed smoke-automatic fire detector, an approved listed fire alarm, or an interruption of power. The fire door assembly or integrated side-swing egress door does not require an electrical supply or battery backup in the self-closing mode. When the rolling steel door is activated, it releases and closes due to gravitational force. The side swinging egress doors and frames swing into position first and then the coiled curtain of the rolling steel door lowers into position.

3.1.1.3 Safescape Models T5000 and T5000-TR: The Safescape models T5000 and T5000-TR are automatic resetting rolling steel fire doors with integral hollow-metal steel, side-swinging egress doors. The T5000 door consists of McKeon F-3 slat profiles described in Section 3.1 of this report. The T5000-TR doors use McKeon IS slat profiles filled with Pyrocrete described in Section 3.1 of this report. The door curtains retract vertically into the area above the ceiling when in the open position. The system is equipped with one or more hollow-metal steel, side-swinging egress doors that are mounted on the door curtain. The listed release device of the listed door operator is activated by either a listed closing device (fusible link) rated at a maximum temperature of 165°F (74°C), an approved listed smoke-automatic fire detector, an approved listed fire alarm, or an interruption of power. The fire door assembly or integrated swinging egress door does not require an electrical supply or battery backup in the self-closing mode. When the rolling steel door is activated, it releases and closes due to gravitational force. Safescape Models T5000 and T5000-TR are equipped with a listed door operator.

3.1.1.4 Models FSPD, FSPD-TR and FSPD-IS: The FSPD series consists of automatic resetting rolling steel fire doors constructed of insulated or noninsulated galvanized or stainless steel slats. The FSPD-IS door curtain slats are insulated with rockwool. The FSPD-TR door curtain slats are insulated with Pyrocrete. The vertically mounted door curtain retracts into a recessed area above the ceiling when in the open position. The listed releasing device is activated by either a listed closing device (fusible link) rated at a maximum temperature of 165°F (74°C), an approved listed smoke-automatic fire detector, an approved listed fire alarm, or an interruption of power. The door does not require an electrical supply or battery backup in the self-closing mode. When the door is activated, it releases and closes due to gravitational forces.

3.1.2 Side-Coiling Fire Door Assemblies:

3.1.2.1 General: Side-coiling door assemblies consist of steel slats (as described in Section 3.1, above) oriented vertically, top-mounted horizontal and bottom floor track, leading edge, barrel assembly, automatic release device, counterweight assembly and governor.

3.1.2.2 Safescape Models S9000, S9500, S7400, S7500, S7700 and S7900: The Safescape models S9000, S9500, S7400, S7500, S7700 and S7900 are automatically resetting, special-purpose, coiling steel fire doors with one or more integral side-swinging egress doors. The Safescape Models S9000 and S7000 series are constructed using McKeon's F-3 slat profiles described in Section 3.1 of this report. The vertically mounted coiling door curtain is side-activated and is designed to travel horizontally. The coiling curtain and side swinging doors are retracted into a coil box for the Safescape S9000 series, or for the Safescape S7000 series, into a door pocket which is recessed in the side wall construction. The fire door, if motor-operated, is equipped with a centrifugal

governor as an integral part of the listed door operator. The listed releasing device of the listed door operator is activated by either a listed closing device (fusible link) rated at a maximum temperature of 165°F (74°C), an approved listed smoke-automatic fire detector, an approved listed fire alarm, or an interruption of power. The fire door assembly or swinging egress door do not require an electrical supply or battery backup in the self-closing mode. When the coiling steel door is activated, it releases and closes horizontally due to captured spring or counterweight force. Safescape models S9000, S7400 and S7700 have one egress door. Safescape models S9500, S7500 and S7900 have two or more egress doors. Safescape models S9000, S9500, S7700 and S7900 are motor-operated and equipped with a listed door operator. Safescape models S7400 and S7500 are manually operated.

3.1.2.3 Models S4000, S7200, and S7600: Models S4000, S7200, and S7600 are automatically resetting, special-purpose fire doors. The door curtain is side-activated and is designed to travel horizontally. The curtain retracts into a coil box or door pocket that is recessed in the side wall construction. Model S4000 retracts into a coil box. Models S7200 and S7600 retract into a door pocket. The S4000 and S7600 are equipped with a motorized, listed door operator. The fire door is equipped with a centrifugal governor as an integral part of the listed door operators. The listed releasing device of the listed door operator is activated by either a listed closing device (fusible link) rated at a maximum temperature of 165°F (74°C), an approved listed smoke-automatic fire detector, an approved listed fire alarm, or an interruption of power. The fire door assemblies do not require an electrical supply, or battery backup in the self-closing mode. When the door is activated, it releases and closes due to captured spring or counterweight force.

3.1.3 Horizontal Sliding Accordion Fire Door Assemblies:

3.1.3.1 General: Horizontal sliding accordion door assemblies consist of steel accordion panels (as described in Section 3.1, above), top-mounted horizontal track, leading edge, counterbalance weight, barrel assembly, and automatic releasing device.

3.1.3.2 Safescape Models AC8400, AC8500, AC8700, and AC8900: Safescape models AC8400, AC8500, AC8700, and AC8900 are automatically resetting, special-purpose, horizontal sliding accordion steel fire doors with one or more integral side-swinging egress doors. The AC8000 series doors are constructed using McKeon's AC slat profiles described in Section 3.1 of this report. The vertically mounted door curtain is side-activated and is equipped to travel horizontally. The curtain is retracted into a door pocket that is recessed in the side wall construction. The accordion fire door, if motor-operated, is designed with a centrifugal governor as an integral part of the listed door operator. The listed releasing device is activated by either a listed closing device (fusible link) rated at a maximum temperature of 165°F (74°C), an approved listed smoke-automatic fire detector, an approved listed fire alarm, or an interruption of power. The fire door assembly or swinging egress door does not require an electrical supply or battery backup in the self-closing mode. When the door is activated, it releases and closes due to captured counterweight force. Safescape models AC8400 and AC8700 have one side-swinging hollow-metal steel egress door, and Safescape models AC8500 and AC8900 have two or more side-swinging hollow-metal steel egress doors. Safescape

models AC8400 and AC8500 operate manually and Safescape models AC8700 and AC8900 both have a motorized, listed door operator.

3.1.3.3 Safescape Model AC8800: The Safescape model AC8800 is an automatically resetting, special-purpose horizontally sliding accordion steel fire door. The vertically-mounted door curtain is side-activated and is designed to travel horizontally. The curtain is retracted into a door pocket that is recessed in the side wall construction. The listed releasing device of the listed door operator is activated by either a listed closing device (fusible link) rated at a maximum temperature of 165°F (74°C), an approved listed smoke-automatic fire detector, an approved listed fire alarm, or an interruption of power. The door requires a listed battery backup in the self-closing mode. When the motorized, listed door operator is triggered, by activation of the battery backup system, it releases and closes the door. The doors have egress paddles on each side. When the paddles are activated, the door opens to predetermined point then returns to the closed position. These models may be used as egress doors in accordance with 2009 IBC Section 1008.1.4.3 and 2006 IBC Section 1008.1.3.3.

3.1.3.4 Models AC8200 and AC8600: Models AC8200 and AC8600 are automatically resetting, special-purpose accordion steel fire doors. The vertically mounted door curtain is side-activated and is designed to travel horizontally. The curtain is retracted into a door pocket that is recessed in the side wall construction. Model AC8600 is equipped with a centrifugal governor as an integral part of the motorized, listed door operator. The listed releasing device is activated by either a listed closing device (fusible link) rated at a maximum temperature of 165°F (74°C), an approved listed smoke-automatic fire detector, an approved listed fire alarm, or an interruption of power. The door does not require an electrical supply or battery back-up in the self-closing mode. When the door is activated, it releases and closes due to captured counterweight force. The AC8600 has a motorized operator.

3.2 Siding-Swinging Egress Doors:

Fire door assemblies incorporating side-swinging, hollow-metal steel egress doors are constructed within the curtain and are designed and built as an integral part of the fire door assembly. These doors must be listed and labeled as evidence of compliance with UL 10C and the applicable code. The side-swinging egress doors incorporated with the fire door assemblies may be used as a means of egress provided the swinging egress doors are installed with approved hardware complying with the door operation requirements in IBC Section 1008.

3.2.1 Egress Door Assembly: The assembly is complete with door, locking channel mechanism or frame, hinges complying with NFPA 80, approved smoke gasketing, and hardware listed both as fire exit hardware and panic hardware.

3.2.2 Egress Door Frame: All-steel unit, formed from No. 14 gage [0.0785 inch (1.99 mm) base-metal thickness], ASTM A 366, hot-rolled steel tubes.

3.2.3 Fire Door Opening Devices: 202P listed fire exit hardware that is also listed panic hardware is provided on one face, while a lever or pull handle is provided on the opposite face of each swinging door.

3.2.4 Closers: 4004T listed swinging door closers are provided for 90-degree pocketed applications. The closers are surface-mounted.

3.2.5 Electromagnetic Door Holders: 1304/AQ Series (electromagnetic listed door holders), wall-type, surface-mounted, with proper projection, are provided to hold swinging doors in the fully open position.

3.2.6 Models T2000, T2500, S9000, S9500, S7400, S7500, S7700, S7900, T5000, AC8400, AC8500, AC8700, AC8900 Hardware: Listed fire exit hardware that is also listed panic hardware is provided on one face, while a lever or pull handles are provided on the opposite face of each swinging egress door.

3.3 Fire Door Motor Operators:

Fire door motor operators must be listed for use with fire door assemblies in accordance with the applicable code.

3.4 Battery Backup System:

The battery backup system must be listed for use with fire door assemblies in accordance with the applicable code.

3.5 Smoke and Draft Control Assemblies:

The fire door assemblies referenced in Table 2 of this report labeled with an "S" rating comply as smoke and draft control door assemblies in accordance with 2009 IBC Sections 711.5.2 and 715.4.3.1 and 2006 IBC Sections 710.5.2 and 715.4.3.1. The fire door assemblies referenced in Table 2 have an air leakage rate of less than 3.0 cfm per square foot (0.015424 m³/s·m²) at 0.10 inch-water (24.9 Pa) pressure differential when tested in accordance with UL 1784.

3.6 Fire-resistance Rating:

The fire-resistance ratings of the fire door assemblies, as described in Table 2 of this report, were established in accordance with UL 10B.

3.7 Opening Protection:

The fire door assemblies referenced in Tables 1 and 2 of this report are recognized for use as opening protectives in openings through fire walls in accordance with the 2009 IBC Section 706.8 and 2006 IBC Section 705.8; walls constructed as fire barriers in accordance with 2009 IBC Section 707.6 and 2006 IBC Section 706.7; fire partitions in accordance with 2009 IBC Section 709.6 and 2006 IBC Section 708.6; walls constructed as smoke barriers in accordance with 2009 IBC Section 710.5 and 2006 IBC Section 709.5; and walls constructed as smoke partitions in accordance with 2009 IBC Section 711.5 and 2006 IBC Section 710.5.

4.0 DESIGN AND INSTALLATION

4.1 General:

Fire door assemblies described in Table 1 must be installed in accordance with the applicable code based on the uses described in this report. The fire door assemblies are designed to be installed in openings having finished dimensions as described in Table 2, unless installed as allowed by the provisions of the applicable code for over-sized doors and Section 4.2 of this report. The fire door assemblies must be installed in accordance with the manufacturer's published installation instructions, the applicable code and this evaluation report. Installation and labeling of the door systems, including the frame, closing and release devices, and anchorage must be in accordance with NFPA 80, as noted in 2009 IBC Sections 715.4.6 715.4.8.2 and 2006 IBC Sections 715.4 and 715.4.7.2.

4.2 Oversized Fire Door Assemblies:

Where a fire-resistance rating is required, a door with dimensions exceeding those described in Table 2, including those equipped with one or more egress

swinging doors, may be installed when approved by the code official provided they comply with the oversized door labeling and certification requirements in accordance with 2009 IBC Section 715.4.6.2 and 2006 IBC Section 715.4.5.2.

4.3 Smoke- and Draft-control Fire Door Assemblies:

“S” rated door assemblies must include either listed brush-type gaskets or neoprene seals along the perimeter of the curtain assembly, in accordance with the door assembly listing approval based on curtain type. Installation of smoke-control doors must be in accordance with NFPA 105.

4.4 Temperature Rise:

FSFD-TR, T2000-TR, T2500-TR, and T5000-TR fire doors have a maximum transmitted temperature end point of not more than 450°F (250°C) above ambient at the end of 30 minutes of fire test exposure as required by Section 715.4.4 of 2009 and 2006 IBC for doors in exit enclosures and exit passageways.

4.5 Means of Egress:

Fire door assemblies incorporating side-swinging egress doors, as described in Section 3.2 of this report, may be used as a means of egress complying with 2009 and 2006 IBC Section 1008. The horizontally sliding accordion fire door assembly (Model AC880 as described in Section 3.1.3.3 of this report) may be used as a means of egress complying with 2009 IBC Section 1008.1.4.3 and 2006 IBC Section 1008.1.3.3.

5.0 CONDITIONS OF USE

The products described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The doors must be fabricated, identified, and installed in accordance with this report and the applicable codes. In the event of a conflict between this report and the manufacturer’s published installation instructions, this report governs.
- 5.2 Approved releasing devices, closing devices, door operators, fire exit hardware, and panic hardware must be installed as required by the applicable code.
- 5.3 Side-swinging egress doors integrated with fire door assemblies must swing in the direction of egress travel, provide clear opening required widths, and comply with opening forces as required by the applicable code. These doors must be listed and labeled as evidence of compliance with UL 10C and the applicable code. Evaluation of the forces needed to open the side-swinging egress door is outside the scope of this report.
- 5.4 Opening sizes must not be greater than the size limitations specified in the applicable code sections referenced in Section 3.15 of this report or Table 2 of this report, whichever is lesser.
- 5.5 Installation of fire doors in exterior locations is beyond the scope of this report.
- 5.6 McKeon Products are manufactured at 44 Sawgrass Drive, Bellport, New York, with quality control inspections by Intertek Testing Services (ITS), N.A.(AA-690), or UL LLC (UL), Inc. (AA-668).

6.0 EVIDENCE SUBMITTED

Reports of fire-resistance tests in accordance with UL LLC Standard UL 10B; reports of fire door evaluation analysis; reports of air leakage tests in accordance with UL Standard 1784; means of egress door test requirements in accordance with 2009 IBC Section 1008.1.4.3; quality control manuals; and manufacturer’s published installation instructions.

7.0 IDENTIFICATION

The McKeon Fire Doors (Safescape T2000, T2000-TR, T2500, T2500-TR, T5000, T5000-TR, S4000, S9000, S9500, S7200, S7400, S7500, S7600, S7700, S7900, AC8200, AC8400, AC8500, AC8600, AC8700, AC8800, AC8900, FSFD, FSFD-IS, and FSFD-TR) described in this report are identified by a label permanently affixed to the door or frame bearing the manufacturer’s name, model number, evaluation report number (ESR-2219) and the applicable labeling required by NFPA 80. The labels for the FSFD-TR, T2000-TR, T2500-TR, and T5000-TR fire doors must also include the temperature rise developed on the unexposed surface of the door after the first 30 minutes of fire exposure [450°F (250°C)], above ambient.

Additionally, the fire door assemblies bear the listing mark label of UL or ITS with the following statements for each series:

1. T2000, T2500, T5000, FSFD, and FSFD-IS: Fire Door Classification Marking “Rolling Steel Type Fire Door, Fire Rating 3 hours.”
2. S9000, S9500, S7200, S7400 S7500, S7600, S7700, S7900 and S4000: Fire Door Classification Marking “Special Purpose Type Fire Door and Frame Assembly, Fire Rating 3 hours.”
3. Accordion AC8200, AC8500, AC8400, AC8600, AC8700, AC8800 and AC8900. “Special Purpose Type Fire Door and Frame Assemblies, Fire Rating 3 hours.”
4. “S” label: AC8200, AC8400, AC8500, AC8600, AC8700, AC8800, AC8900, T2000, T2000-TR, T2500, T2500-TR, T5000, T5000-TR, S4000, S9000, S9500, S7200, S7400, S7500, S7600, S7700, S7900, FSFD, FSFD-IS, and FSFD-IS TR: All of these products must be provided with the letter “S” on the fire rating label of the door if intended for use as smoke and draft control door assemblies. When gasketing is required, the label must indicate that the door and frame assembly are in compliance when listed or labeled gasketing is also installed as indicated in 2009 IBC Section 715.4.6.3 and 2006 IBC Section 715.4.5.3.
5. FSFD-TR : Fire Door Classification Marking “Rolling Steel Type Fire Door, Fire Rating 1.5 hours for single door installation; 4 hours when back-to-back installation is provided”; and, where required for fire doors in exit enclosures and exit passageways by 2009 and 2006 IBC Section 715.4.4, the maximum transmitted temperature of not more than 450°F (250°C), above ambient.
6. T2000-TR, T2500-TR, and T5000-TR: Fire Door Classification Marking “Rolling Steel Type Fire Door, Fire Rating 1.5 hours for single door installation.”
7. For oversize doors, see Section 4.2 of this report for labeling and certificates.

TABLE 1 – FIRE DOOR OPERATING CHARACTERISTICS AND INSTALLATION CONFIGURATIONS

FIRE DOOR TYPE	MODEL NUMBER	OPERATING CHARACTERISTICS	INSTALLATION CONFIGURATION OF SIDE-SWINGING EGRESS DOORS	MAXIMUM DIMENSIONS OF SIDE-SWINGING EGRESS DOORS	
				Height (feet-inches)	Width (feet-inches)
Vertical Coiling	T2000 and T2000-TR	Motorized	1 swinging door mounted to adjacent wall pocket	8-0	4-0
	T2500 and T2500-TR	Motorized	2 swinging doors mounted to adjacent wall pockets	8-0	4-0
	T5000 and T5000-TR	Motorized	1 or more swinging doors	8-0	4-0
	FSFD	Manual and motorized	None	---	---
	FSFD-IS and FSFD-TR	Manual and motorized	None	---	---
Side Coiling	S4000	Motorized	None	---	---
	S7200	Manual	None	---	---
	S7400	Manual	1 swinging door	8-0	4-0
	S7500	Manual	2 or more swinging doors	8-0	4-0
	S7600	Motorized	None	---	---
	S7700	Motorized	1 swinging door	8-0	4-0
	S7900	Motorized	2 or more swinging doors	8-0	4-0
	S9000	Motorized	1 swinging door	8-0	4-0
S9500	Motorized	2 or more swinging doors	8-0	4-0	
Horizontal Accordion	AC8200	Manual	None	---	---
	AC8400	Manual	1 swinging door	8-0	4-0
	AC8500	Manual	2 or more swinging doors	8-0	4-0
	AC8600	Motorized	None	---	---
	AC8700	Motorized	1 swinging door	8-0	4-0
	AC8800	Motor w/ battery backup ¹	None	---	---
	AC8900	Motorized	2 or more swinging doors	8-0	4-0

For SI: 1 inch=25.4 mm, 1 foot=304.8 mm.

¹Model AC8800 horizontal sliding accordion doors may be used as a means of egress in accordance with 2009 IBC Section 1008.1.4.3 and 2006 IBC Section 1008.1.3.3.

TABLE 2— FIRE DOOR DIMENSIONS AND CLASSIFICATIONS^{1,2,3,4,7}

MODEL NUMBER	FIRE DOOR ASSEMBLY RATING (HOURS)	MAXIMUM OPENING SIZE LIMITATIONS	
		Width (feet-inches)	Height (feet-inches)
T2000	3	13-0	12-0
T2500	3	13-0	12-0
T5000	3	13-0	12-0
T2000-TR ⁵	1.5	13-0	12-0
T2500-TR ⁵	1.5	13-0	12-0
T5000-TR ⁵	1.5	13-0	12-0
T5000	3	13-0	12-0
FSFD	3	12-0	10-0
FSFD-IS	3	12-0	10-0
FSFD-TR ⁵	1.5	12-0	10-0
FSFD-TR ⁶	4	12-0	10-0
S4000	3	14-0	10-6
S7200	3	14-0	10-6
S7400	3	14-0	10-6
S7500	3	14-0	10-6
S7600	3	14-0	10-6
S7700	3	14-0	10-6
S7900	3	14-0	10-6
S9000	3	14-0	10-6
S9500	3	14-0	10-6
AC8200	3	13-0	10-0
AC8400	3	13-0	10-0
AC8500	3	13-0	10-0
AC8600	3	13-0	10-0
AC8700	3	13-0	10-0
AC8800	3	13-0	10-0
AC8900	3	13-0	10-0

For **SI**: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

¹The maximum opening size shall not exceed the size limitations referenced in those sections of the applicable codes described in Section 3.15 of this report.

²An oversize door certificate or label complying with the requirements found in IBC Section 715.4.5.2 is required for opening sizes greater than the tabulated values.

³Fire door assemblies listed above can be installed in either rated gypsum wall construction or masonry construction.

⁴The slats of the FSFD-TR, T2000-TR, T2500-TR, and T5000-TR are insulated with Pyrocrete.

⁵The FSFD-TR, T2000-TR, T2500-TR, and T5000-TR fire doors have a maximum transmitted temperature of 450°F (232°C) for single-door applications.

⁶The fire-resistance rating of the FSFD-TR can be 4 hours when the doors are installed in a back-to-back configuration.

⁷Smoke- and draft-control fire door assemblies are labeled with an “S” rating when installed in accordance with NFPA 105, the applicable code and the manufacturer’s published installation instructions.