

Primary applications for Ross DS Series Security Doors and Frames include government, industrial, commercial and residential properties where protection of people and property is of utmost concern and where forced entry and ballistic threats are present singularly or in combination; where conformance to U.S. Department of State forced-entry and ballistic threat levels is required; and where aesthetic, architectural or security concerns require an architecturally finished product that blends or complements surrounding building elements. For more information, please call our toll-free number above or visit our website.

Ross DS Series Security Doors and Frames are available in full vision, partial vision, double vision or opaque styles as single door or door pairs. With steel construction, they are tested to either 5 or 15 minutes of simulated "mob" forced-entry attack in multiple locations on the door, and resistant to 5.56 M193 & M855, plus 7.62 M80 ballistic rounds (15 minute FE/BR units). Reinforced, formed steel frame matches profile and look of existing steel doors. Standard 2-1/4" thick door leaf allows for integration of virtually any type or style of hardware. Lock options include manually-thrown forced entry locks or automatically-locking multi-point system. Heavy duty, polished stainless steel hinges have been tested to 1,500,000 cycles. Optional door cladding allows for virtually unlimited finish styles: paint, stainless steel, aluminum, wood veneer. The widespread acceptance and success of our products stem from Ross' test-proven designs and extremely high level of manufacturing quality.

SECTION 083453

SECURITY DOORS AND FRAMES

(ROSS DS SERIES SECURITY DOORS AND FRAMES)

PART 1 - GENERAL

1.1 SUMMARY

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
 - 1. Steel security doors and frames.

1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's product data for each type of product.
- B. Shop Drawings: Submit shop drawings including the following:
 - 1. Complete list of materials and manufacturer's descriptive and technical literature.
 - 2. Proposed layout, details of construction and anchorage and relationship to other parts of the work.
 - 3. Manufacturer's certification of security performance.
- C. Warranty: Submit executed copy of manufacturer's standard limited warranty.

1.3 QUALITY ASSURANCE

- A. Installer: Minimum 2 year documented history of installing similar security doors and frames and acceptable to the manufacturer. Installer shall accept responsibility for all field verifications.
- B. Manufacturing Facility: Certified to ISO 9001: 2015.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Store materials in a location protected from the weather, humidity, temperature variation, dirt and dust, or other contaminants.

1.5 WARRANTY

- A. Warranty: Provide manufacturer's standard limited 5-year warranty.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Basis-of-Design Manufacturer: Ross Technology Corporation, 104 North Maple Avenue, Leola, PA 17540. Toll-free 800-345-8170. www.rosstechnology.com. No substitutions.

2.2 SECURITY DOOR AND FRAMES

- A. Security Door and Frames: Steel Security Doors and Frames by Ross Technology Corporation complying with the following:

1. Model DSSO-05:

- a. Door Style: Single, opaque.
- b. Door Leaf Construction: Welded steel.
- c. Leaf Thickness: 2-1/4 inches (57 mm).
- d. Door Frame Construction: Formed, reinforced and welded steel.
- e. Frame Depth: 5.63 inches (143 mm).
- f. Mounting Technique: M12 or larger bolts, maximum 12 inches on center.
- g. Ballistic Resistance: Not applicable.
- h. Forced Entry Resistance: 5 minutes per DOS SD-STD-01.01 Rev G (Amended).
- i. DOS Code: 2141.
- j. Blast Resistance: Not applicable.
- k. Fire Rating: Not applicable.
- l. Hinge Cycle Testing: 1,500,000 cycles per ANSI/BHMA A156.1 while mounted on a door.
- m. Forced Entry Lock System: Two, manually actuated.
- n. Hinges: Two, stainless steel.

2. Model DSDO-05:

- a. Door Style: Double, opaque. One active, one inactive leaf.
- b. Door Leaf Construction: Welded steel.
- c. Leaf Thickness: 2-1/4 inches (57 mm).
- d. Door Frame Construction: Formed, reinforced and welded steel.
- e. Frame Depth: 5.63 inches (143 mm).
- f. Mounting Technique: M12 or larger bolts, maximum 12 inches on center.
- g. Ballistic Resistance: Not applicable.
- h. Forced Entry Resistance: 5 minutes per DOS SD-STD-01.01 Rev G (Amended).
- i. DOS Code: 2141.
- j. Blast Resistance: Not applicable.
- k. Fire Rating: Not applicable.
- l. Hinge Cycle Testing: 1,500,000 cycles per ANSI/BHMA A156.1 while mounted on a door.

- m. Forced Entry Lock System: Two, manually actuated.
 - n. Hinges: Two, stainless steel.
3. Model DSSV-05:
- a. Door Style: Single, vision panel.
 - b. Door Leaf Construction: Welded steel.
 - c. Leaf Thickness: 2-1/4 inches (57 mm).
 - d. Door Frame Construction: Formed, reinforced and welded steel.
 - e. Frame Depth: 5.63 inches (143 mm).
 - f. Mounting Technique: M12 or larger bolts, maximum 12 inches on center.
 - g. Ballistic Resistance: Not applicable.
 - h. Forced Entry Resistance: 5 minutes per DOS SD-STD-01.01 Rev G (Amended).
 - i. DOS Code: 1141.
 - j. Blast Resistance: Not applicable.
 - k. Fire Rating: Not applicable.
 - l. Hinge Cycle Testing: 1,500,000 cycles per ANSI/BHMA A156.1 while mounted on a door.
 - m. Forced Entry Lock System: Two, manually actuated.
 - n. Hinges: Two, stainless steel.
4. Model DSDV-05:
- a. Door Style: Double, vision panel. One active, one inactive leaf. Vision panels in one or both doors.
 - b. Door Leaf Construction: Welded steel.
 - c. Leaf Thickness: 2-1/4 inches (57 mm).
 - d. Door Frame Construction: Formed, reinforced and welded steel.
 - e. Frame Depth: 5.63 inches (143 mm).
 - f. Mounting Technique: M12 or larger bolts, maximum 12 inches on center.
 - g. Ballistic Resistance: Not applicable.
 - h. Forced Entry Resistance: 5 minutes per DOS SD-STD-01.01 Rev G (Amended).
 - i. DOS Code: 1141.
 - j. Blast Resistance: Not applicable.
 - k. Fire Rating: Not applicable.
 - l. Hinge Cycle Testing: 1,500,000 cycles per ANSI/BHMA A156.1 while mounted on a door.
 - m. Forced Entry Lock System: Two, manually actuated.
 - n. Hinges: Two, stainless steel.
5. Model DSSO-15R:
- a. Door Style: Single, opaque.
 - b. Door Leaf Construction: Welded steel.
 - c. Leaf Thickness: 2-1/4 inches (57 mm).
 - d. Door Frame Construction: Formed, reinforced and welded steel.
 - e. Frame Depth: 5.63 inches (143 mm).
 - f. Mounting Technique: M12 or larger bolts, maximum 12 inches on center.
 - g. Ballistic Resistance: 5.56 M193, 5.56 M855, 7.62 M80 per DOS SD-STD-01.01 Rev G (Amended).
 - h. Forced Entry Resistance: 15 minutes per DOS SD-STD-01.01 Rev G (Amended).
 - i. DOS Code: 2123.
 - j. Blast Resistance: Not applicable.
 - k. Fire Rating: Not applicable.
 - l. Hinge Cycle Testing: 1,500,000 cycles per ANSI/BHMA A156.1 while mounted on a door.

- m. Forced Entry Lock System: Two, manually actuated.
 - n. Hinges: Two, stainless steel.
6. Model DSDO-15R:
- a. Door Style: Double, opaque. One active, one inactive leaf.
 - b. Door Leaf Construction: Welded steel.
 - c. Leaf Thickness: 2-1/4 inches (57 mm).
 - d. Door Frame Construction: Formed, reinforced and welded steel.
 - e. Frame Depth: 5.63 inches (143 mm).
 - f. Mounting Technique: M12 or larger bolts, maximum 12 inches on center.
 - g. Ballistic Resistance: 5.56 M193, 5.56 M855, 7.62 M80 per DOS SD-STD-01.01 Rev G (Amended).
 - h. Forced Entry Resistance: 15 minutes per DOS SD-STD-01.01 Rev G (Amended).
 - i. DOS Code: 2123.
 - j. Blast Resistance: Not applicable.
 - k. Fire Rating: Not applicable.
 - l. Hinge Cycle Testing: 1,500,000 cycles per ANSI/BHMA A156.1 while mounted on a door.
 - m. Forced Entry Lock System: Two, manually actuated.
 - n. Hinges: Two, stainless steel.
7. Model DSSV-15R:
- a. Door Style: Single, vision panel.
 - b. Door Leaf Construction: Welded steel.
 - c. Leaf Thickness: 2-1/4 inches (57 mm).
 - d. Door Frame Construction: Formed, reinforced and welded steel.
 - e. Frame Depth: 5.63 inches (143 mm).
 - f. Mounting Technique: M12 or larger bolts, maximum 12 inches on center.
 - g. Ballistic Resistance: 5.56 M193, 5.56 M855, 7.62 M80 per DOS SD-STD-01.01 Rev G (Amended).
 - h. Forced Entry Resistance: 15 minutes per DOS SD-STD-01.01 Rev G (Amended).
 - i. DOS Code: 1123.
 - j. Blast Resistance: Not applicable.
 - k. Fire Rating: Not applicable.
 - l. Hinge Cycle Testing: 1,500,000 cycles per ANSI/BHMA A156.1 while mounted on a door.
 - m. Forced Entry Lock System: Two, manually actuated.
 - n. Hinges: Two, stainless steel.
8. Model DSDV-15R:
- a. Door Style: Double, vision panel. One active, one inactive leaf. Vision panels in one or both doors.
 - b. Door Leaf Construction: Welded steel.
 - c. Leaf Thickness: 2-1/4 inches (57 mm).
 - d. Door Frame Construction: Formed, reinforced and welded steel.
 - e. Frame Depth: 5.63 inches (143 mm).
 - f. Mounting Technique: M12 or larger bolts, maximum 12 inches on center.
 - g. Ballistic Resistance: 5.56 M193, 5.56 M855, 7.62 M80 per DOS SD-STD-01.01 Rev G (Amended).
 - h. Forced Entry Resistance: 15 minutes per DOS SD-STD-01.01 Rev G (Amended).
 - i. DOS Code: 1123.
 - j. Blast Resistance: Not applicable.
 - k. Fire Rating: Not applicable.

- l. Hinge Cycle Testing: 1,500,000 cycles per ANSI/BHMA A156.1 while mounted on a door.
 - m. Forced Entry Lock System: Two, manually actuated.
 - n. Hinges: Two, stainless steel.
9. Model DSSO-15R-AL:
- a. Door Style: Single, opaque.
 - b. Door Leaf Construction: Welded steel.
 - c. Leaf Thickness: 2-1/4 inches (57 mm).
 - d. Door Frame Construction: Formed, reinforced and welded steel.
 - e. Frame Depth: 5.63 inches (143 mm).
 - f. Mounting Technique: M12 or larger bolts, maximum 12 inches on center.
 - g. Ballistic Resistance: 5.56 M193, 5.56 M855, 7.62 M80 per DOS SD-STD-01.01 Rev G (Amended).
 - h. Forced Entry Resistance: 15 minutes per DOS SD-STD-01.01 Rev G (Amended).
 - i. DOS Code: 2123.
 - j. Blast Resistance: Not applicable.
 - k. Fire Rating: Not applicable.
 - l. Hinge Cycle Testing: 1,500,000 cycles per ANSI/BHMA A156.1 while mounted on a door.
 - m. Forced Entry Lock System: Multi-point, automatically actuated when door closes.
 - n. Hinges: Two, stainless steel.
 - o. Optional for Model DSSO-15R-AL: Entry and exit hardware, solenoid release, combinations locks, motorized retraction systems as applicable; exclusive to lock manufacturer.
10. Standard Features:
- a. Full door system, with all hardware and glazing factory installed and tested.
 - b. Formed steel frame with welded corners.
 - c. Removable glazing stop.
 - d. Laminated glazing to meet applicable threats.
 - e. Forced-entry-resistant, low friction stainless steel hinges.
 - f. Forced-entry locks – manually thrown or automatically actuated.
 - g. Ballistic stop bars to protect construction shim gap (on ballistic-rated units).
 - h. Provisions for electric and pneumatic connections.
 - i. Accessible terminal block to facilitate field connections.
11. Door Leaf and Frame: (optional)
- a. Door leaf cladding.
 - b. Frame cladding.
 - c. Peepholes.
 - d. Transom lights and sidelites.
 - e. Sub-frames for installation, pre-drilled and tapped plate-type embeds.
 - f. Sub-frames for installation, pre-drilled and tapped tube-type frames.
12. Hardware:
- a. Wide variety of complimentary access hardware.
 - b. Combination and deadbolt locks.
 - c. Position sensors.
 - d. Pneumatic closers.
 - e. Electrical closers.

13. Door Glazing:

- a. Full vision, double vision or half vision lites.
- b. Custom shapes.
- c. Low-e hardcoats.
- d. Films for RF / IR attenuation.
- e. Tints.
- f. Frits.
- g. High-definition printing.
- h. Switchable privacy glass.

14. Finish:

- a. Hot-dip galvanized, ASTM A123. (standard).
- b. Hot-dip galvanized, ASTM A123 and zinc rich primer.
- c. Hot-dip galvanized, ASTM A123 and zinc rich primer and manufacturer's standard powder coating. (contact Ross for color chart and minimum quantities)
- d. Aluminum cladding, painted finish.
- e. Aluminum cladding, anodized finish.
- f. Aluminum cladding, mill finish.
- g. Stainless steel cladding.
- h. Wood veneer cladding, species as selected.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and site conditions for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install products in strict accordance with manufacturer's instructions and approved submittals. Locate security windows level, plumb, and in proper alignment with adjacent work. Provide installation method suitable for substrate and project conditions:

- 1. Pre-drilled and tapped plate-type embeds cast into concrete.
- 2. Pre-drilled and tapped steel tube-type sub-frames bolted into the wall.
- 3. Pre-drilled and tapped steel tube-type sub-frames welded to the wall structure.

- B. Protect adjacent areas against damage; repair or patch damaged areas. Restore damaged finishes so no evidence remains of corrective work.

3.3 ADJUSTING AND CLEANING

- A. Clean exposed surfaces using methods acceptable to the manufacturer which will not damage finish.

END OF SECTION

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