

SS-SERIES

Stainless Steel

STANDARD STEEL DOORS & FRAMES

ABOUT THE PRODUCT

The SS-Series doors are VS-Series Flush Doors, fabricated from No. 304 or No. 316 stainless steel material. They are designed to meet and exceed the harsh environmental exposures such as chemicals, water, moisture and others. Typical uses are Indoor swimming pool areas, laboratories, hospitals, bottling plants, food processing plants and all tropical environments.

FEATURES

CORE:

- Spaces between stiffeners are insulated with fiber glass or mineral Rockwool to the full height of the door.
- Standard infill thickness 41-42 mm of nominal density 24 Kg/m³ for fiber glass and 50 kg/m³ for Rockwool.
- Thermal Conductance (50 mm): Rockwool $U = 0.6278 \text{ w/m}^2\text{k}$ (0.11Btu/hr.ft².°F. (ASTM C177).
- Thermal Resistance: Rockwool $R = 1.593 \text{ m}^2\text{k/w}$ (9.04 hr.ft².°F/Btu) (ASTM C518-63T).
- Combustibility: None / IMO Resolution-ASTM E 136-82, BS 476 Part 4, ISO R1182.

OPTIONS:

- Polystyrene or Polyurethane core infill for non-fire doors (see details of PU & PS Series).
- Beveled or flush welded glass beads.
- Stainless Steel material, Grade 304 or 316 conforming to ASTM A666, available in different finishes, being mill, brush hairline # 4, or mirror finish # 8, in order to conform to any architectural requirement.
- Fully glazed leaf.
- All internal reinforcement parts are also available in stainless steel material (refer to "Leaf & Frame Construction").
- Vision panels, louver kits, transoms and sidelights.

SPECIFICATIONS OF COMPLIANCE

- Construction of the SS-Series doors meets the requirements of ANSI A250.8 (SDI 100) and ANSI 151.1.
- Fire Rating: Up to 1 1/2 hours for single leaf and double leaf swing doors, listed and labeled by Intertek-Warnock Hersey according to UL 10C, UL 10B, UBC 7-2-1994/1997, NFPA 252-1995, ASTM E152-81a, CAN4 S 104-1980, and BS 476
- Level "A" grade in accordance with ANSI A 250.4 test procedures.

As stated by HMMA / NAAMM – USA (National Association of Architectural Metal Manufacturers- United States of America):

"Stainless Steel doors are used for the severely (No. 316) or moderately (No. 304) corrosive applications where corrosive resistance is the primary concern such as in public swimming pools which are highly chlorinated".



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RECOMMENDATIONS

• Grade # 304 stainless steel is recommended for areas where corrosive materials are present in the atmosphere.

• Grade #316 stainless steel is recommended for swimming pool areas where high concentrations of chlorine are used.



LEAF & FRAME CONSTRUCTION

- 45 mm (1 3/4") thick full flush construction fabricated from 1.2 mm (GA 18) thick stainless steel sheets (refer to options). Available also in nominal 1.0 mm (GA 20), and 1.5 mm (GA 16).
- Complete steel skeleton structure inside leaf (cold rolled steel sheets to ASTM A1008 or galvanized steel sheets to ASTM A653-A526), to which steel vertical stiffeners and all other hardware reinforcements are welded.
- Face sheets are stiffened by vertical 0.8 mm (GA 22) mild steel stiffeners spaced 190 mm on center and attached with 3M adhesive tape to the internal steel skeleton.
- 1.5 mm (GA 16) thick top and bottom channels.
- Mechanically interlocked, hemmed vertical edge seams for added strength and rigidity.
- 5.0 mm steel hinge reinforcement and 2.0 mm (GA 14) steel lock and strike reinforcements. Hardware reinforcing in accordance to ANSI, SDI, NFPA standards requirements.
- Frame fabricated from 1.5 mm (GA 16) thick stainless steel sheet, fully clad over a 1.2 mm (GA 18) steel frame to which all hardware reinforcements are welded.

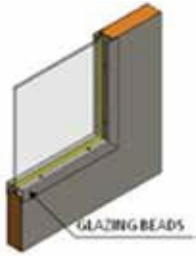


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DOOR DETAILS



Glazing beads



Louvers



Standard astragal



Cylindrical Lock preparation

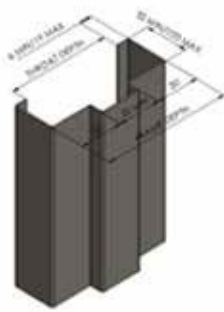


Mortise lock preparation

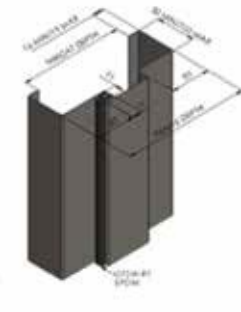


Hinge preparation on door

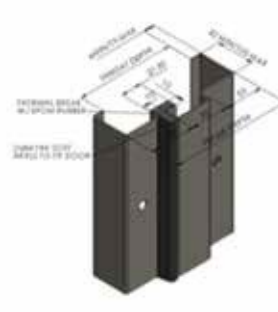
FRAME DETAILS



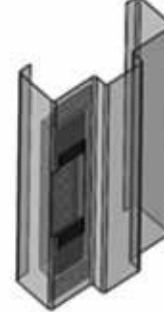
Std. frame profile



Groove type frame



Thermal brake frame



Strike preparation on frame



Knocked down frame



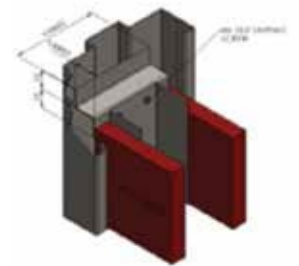
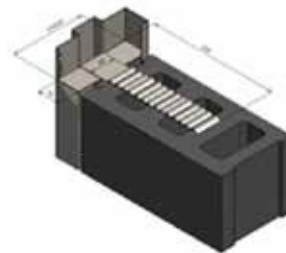
Corner welded frame



Expansion Anchor for Masonry and concrete wall



T-anchor for masonry wall



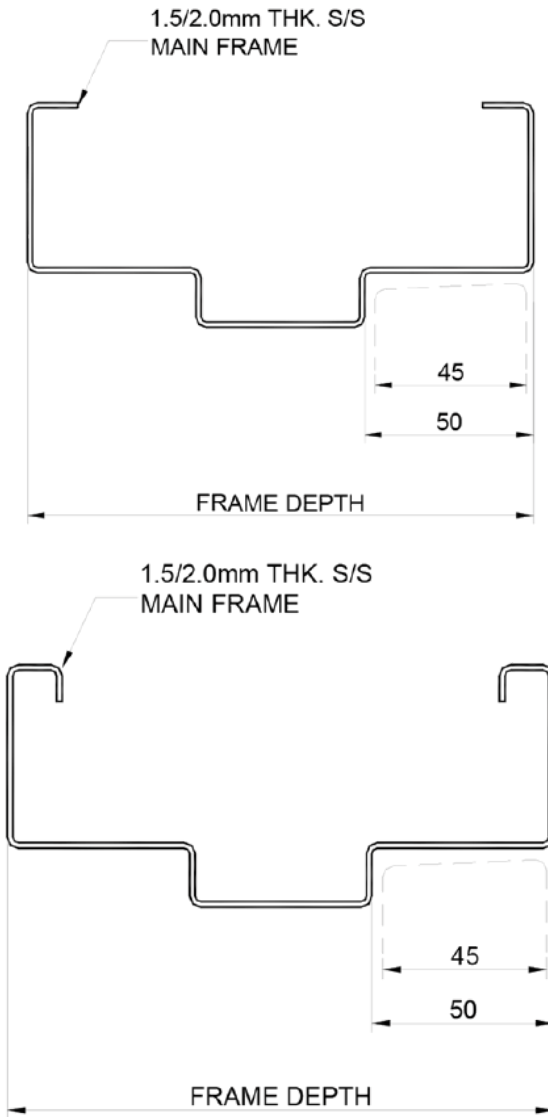
Z-anchor for dry wall

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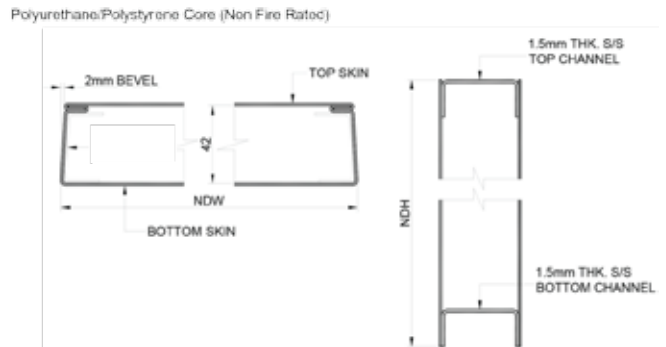
FRAME CONSTRUCTION



SHEET THICKNESS

| Gage | Thickness (mm) | Materials | Finish |
|-------|----------------|---------------------------------------|---|
| GA 16 | 1.5 | Stainless Steel Sheet Grade 304 & 316 | Mirror Finish, Mill Finish, #4 Hairline Finish. |
| GA 14 | 2.0 | | |

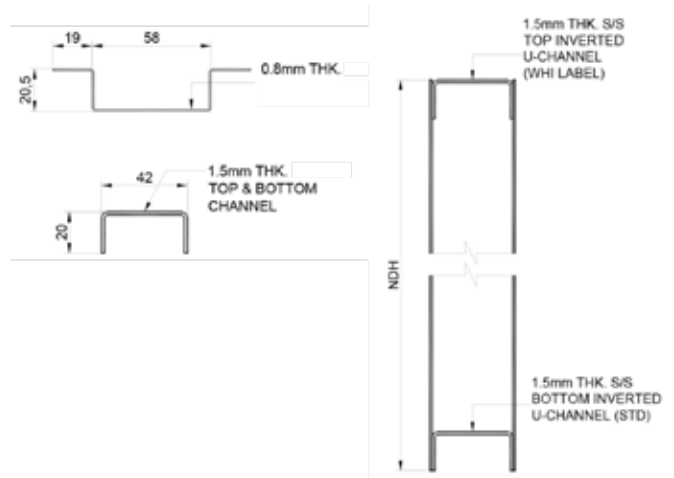
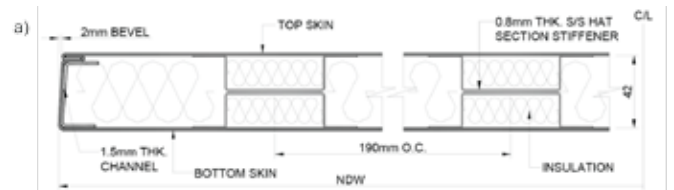
DOOR CONSTRUCTION



a) Polyurethane Insulation:
Density : 35-37 kg/m³
Normal maximum size we can do on polyurethane 1470 x 3000 mm NDH for Non Fire Rated

b) Polystyrene Insulation:
Density : 38 kg/m³
Maximum size 1084 x 2431 mm NDH for Non Fire Rated (This maximum size are taken from 4'x8' steel sheet, may varies depending on the availability of Stainless steel sheet).

Vertical Steel Stiffened (WHI Label Fire Rated)



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FIBERGLASS CORE (NON FIRE RATED)

Density : 24 kg/m³

Max. Leaf size 1084 x 2431 mm NDH for Non Fire Rated.

Note: Fiberglass Insulation can be labeled as long as the specified density and thickness are equal to the tested mineral rock wool to maintain thermal resistance.

MINERAL ROCKWOOL (RATED UP TO 1 1/2 HRS ONLY, WHI LABEL).

Density: 50 kg/m³

Maximum size (DW x DH) for Fire Rated:

1090x2440 mm DH Single swing doors rated up to 90 minutes.

2176 x 2440 mm DH Pairs of swinging in the same direction rated up to 90 minutes.

For more than the above sizes, Oversize Certificate can be issued.

Type of Wall: Masonry and Concrete wall only.

Test Standard: UBC 7-2 (1997), NFPA 252 (1999), UL 10C (1998), ASTM e2072 (2000) ULC, CAN 4-S-104-M80

SHEET THICKNESS

| Gage | Thickness (mm) | Materials | Finish |
|---------------|----------------|---------------------------------------|---|
| GA 18 / GA 16 | 1.2/1.5 | Stainless Steel Sheet Grade 304 & 316 | Mirror Finish, Mill Finish, #4 Hairline Finish. |



DOOR THICKNESS

45 mm thick for fire rated labels

DOOR NET WEIGHT (THEORETICAL):

| Insulation | Weight (kg/m ²) 45mm thk. | |
|--|---------------------------------------|--------------|
| | 1.2 mm Thick | 1.5 mm Thick |
| Polyurethane Core | 23.3 | 29 |
| Polystyrene Core | 23 | 28.75 |
| Fiberglass (24kg/m ³) | 32.5 | 40.6 |
| Mineral Rock Wool (50kg/m ³) | 33.7 | 42.12 |

