

Steel Doors

Over the years, Metalec has established a solid reputation in the steel door manufacturing area of expertise for commercial, industrial and institutional purposes.

The Metalec steel doors are offered in several sizes with a variety of designs and cores available. They can also be available in 20, 45, 90, and 180 min. fire rating. A label is affixed on the product to certify the fire resistance period.

TECHNICAL DETAILS

SPECIFICATIONS ("PS" SERIES)

- All of the Metalec steel doors are manufactured from 20, 18 or 16 gauges galvanized steel;
- The door faces are perfectly smooth, without visible joint;
- The door panels are vertically assembled one to each other by a mechanical lock seam with flush welding near the hardware perforations;
- The door edges have a bevel of 3 mm x 51 mm (1/8" x 2");
- 16 gauge steel end channel is welded by electric resistance at the top and the bottom of the door at each 152 mm (6") center to center;
- The non-insulated steel doors has a full honeycomb core made of 16 kg/m³ (1,0 lb/cu.ft) density kraft paper with 25 mm (1") cell size, laminated to the door faces by a polyurethane base adhesive;
- The insulated doors have a 54 kg/m³ (3,4 lb/cu.ft) density polyurethane sheet core with a thermal resistance of RSI 2,0 (R-12.9); or a 16 kg/m³ (1,0 lb/cu.ft) density polystyrene sheet core with a thermal resistance of RSI 0,7 (R-3,75), laminated to the door faces by a polyurethane base adhesive;
- The doors are mortised for three standard hinges of 114 mm x 102 mm (4- 1/2" x 4");
- The hinge reinforcements are made with 10 gauge steel, and the top hinge is reinforced to have additional stiffening bend for high frequency strength;
- The doors are prepared for a standard cylindrical lock or reinforced for a surface-mounted panic bar or for a "push/pull" handle;
- Door closer reinforcement made of 16 gauge steel channel is installed on the top of all steel doors. When the door is reversible, a door closer reinforcement is added at the other end of the door. In the insulated steel doors, all the channels used as reinforcements are filled with the same insulating material as the door.

OPTIONS

Metalec doors and frames offers a glazing kit made of 16 gauge galvanized steel frames with welded mitred corners. Several designs are available and Metalec offers you some designs.

For example:

"NL" – "LNL" – "DNL" – "HG" – "FWR" – "VL" – "CGL" type.

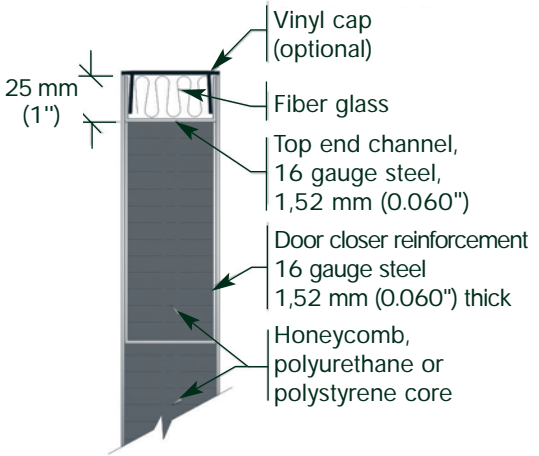
- All of these designs are also available in Z275 (G90) galvanized steel;
- Vinyl caps installed at the top of the doors for exterior openings;
- Mechanical lock seams welded at each 152 mm (6") center to center grinded, filled with metallic paste, ground smooth and primed;
- Other hardware preparations are also available upon request.

MAXIMUM LIMITATIONS OF THE GLAZED OPENINGS IN FIRE DOORS

For 180 min. fire rated door:	no glazing allowed
For 90 min. fire rated door:	max. 645 cm ² (100 in ²) per door
For 45 min. fire rated door:	max. 8361 cm ² (1296 in ²) per opening

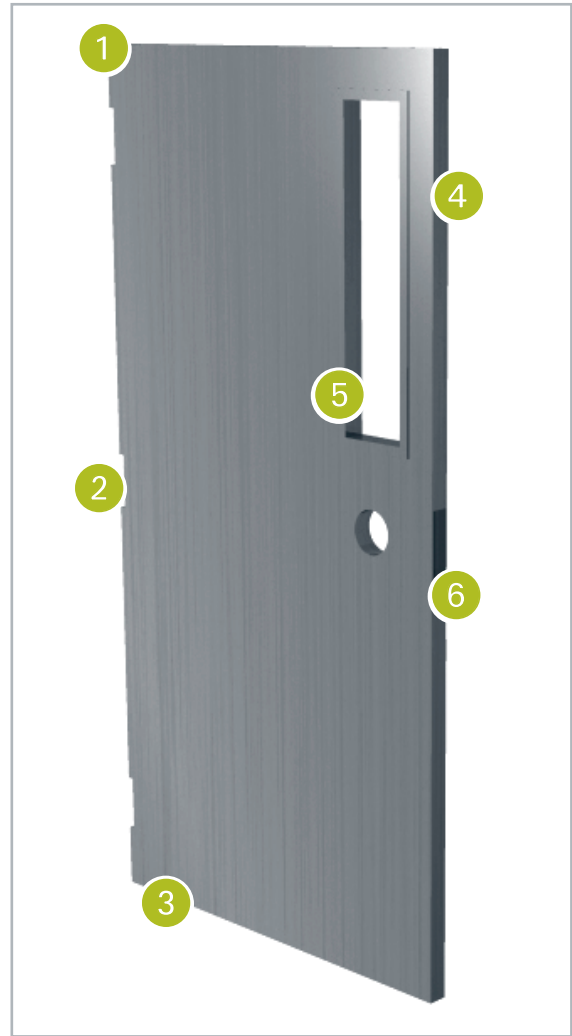
Steel Doors

1



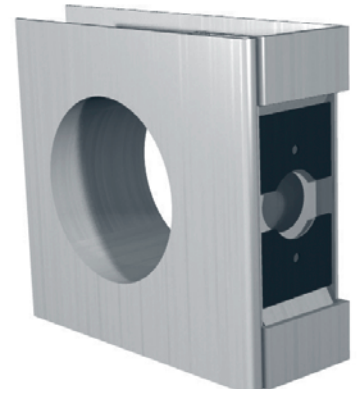
2

Hinge reinforcement
10 gauge steel
114 mm x 102 mm (4-1/2" x 4")

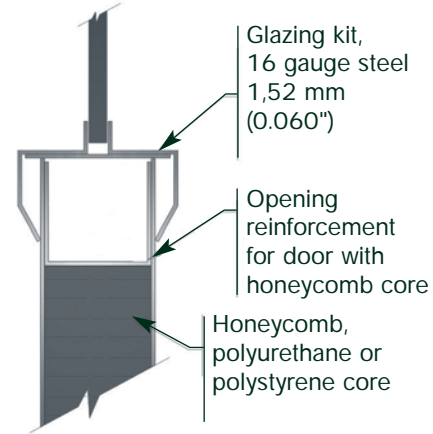


6

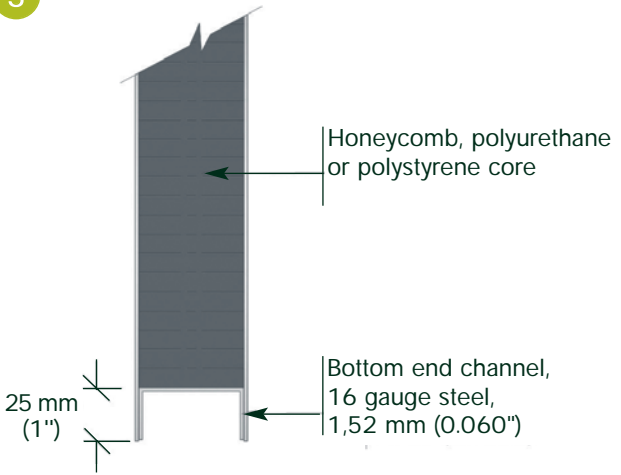
Standard cylindrical lock preparation (161) at 70 mm (2 3/4")



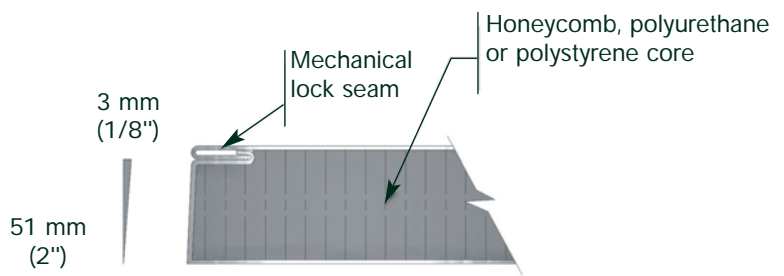
5



3



4



Steel Doors

TECHNICAL DETAILS ("PRV" SERIES)

- Heavy duty doors from "PRV" series are available in 18, 16 and 14 gauges steel;
- These doors are designed to withstand high frequency use. They have been used in schools, hospitals, detention centres and recreational buildings;
- Using essentially the same manufacturing process as the "PS" series, these doors have vertical 18 gauge steel reinforcements welded to the door faces at each 152 mm (6") on center.
- The voids between the vertical reinforcements can be filled with polyurethane, polystyrene, honeycomb kraft paper or a fiberglass insulating material;
- The door faces are assembled vertically one to each other by a mechanical lock seam with flush welding near the hardware perforations;
- A 14 gauge steel vertical channel reinforcement is welded at the joint on each side to strengthen the assembly. A primer is applied all over the joint.

TECHNICAL DETAILS ("PCR" SERIES)

- The doors from "PCR" series have a temperature rise core designed to limit temperature rise on the non exposed door face up to 250° C, thus allowing the people being in the building to safely evacuate the area;
- The doors are designed and tested to provide a fire resistance period up to 180 min.
- Built as the "PS" series, "PCR" series doors have a mineral fibre core approved by WHI laboratory. This core is laminated to the door faces by a polyurethane base adhesive.

TECHNICAL DETAILS ("PS-18BTH" SERIES)

The insulated steel doors with thermal break manufactured by Metalec are the ideal solution for the exterior openings of the buildings. They are manufactured in two parts separated by a low thermal conductive PVC flashing which eliminates thermal bond between the exterior and interior door faces. The thermal break is installed near the interior door face. When this door is installed with the thermally broken frame, this insures continuity of the thermal break.

- The door has a polyurethane sheet core with a thermal resistance of RSI 2,0 (R 12.9), laminated to the door faces by a polyurethane base adhesive;
- The door closer and the panic bar reinforcements are made of steel joined by a thermal break and filled with polyurethane insulation;
- Top and bottom reinforcement is made from 16 gauge steel channels separated by a thermal break;
- The top reinforcement is welded by electrical resistance at the door faces. The void is filled with fiberglass insulation covered by a vinyl cap to allow a perfect sealing;
- The bottom reinforcement is reversed welded and outcrop at the door faces;
- The doors are mortised for three hinges of 114 mm x 102 mm (4-1/2" x 4");
- The hinge reinforcements are made from 10 gauge steel;
- The doors are prepared for a standard cylindrical lock (161) or have a surface mounted panic bar reinforcement.

OPTIONS

- A Lite Kit for glazed opening is offered in this serie. Take note that there is no thermal bond between the outside and inside part;
- Z275 (G90) galvanized steel.