SERIES 901/902/903

MULTISECTION VERTICAL LIFT DOOR

General: The multiblade door comprises of three or more sliding vertical blades on rails fixed on each side of the opening. The blades are connected to a stabilizing device. The drive mechanism comprises essentially of an electric operator connected to the driving blade by a chain system. The system is highly safe and reliable for up to 1,000,000 cycles, and ideal for industrial applications.

Blades: The steel frame of each blade is typically made of 51mm steel profiles welded together. The exterior face is covered of satin steel sheets 1.52mm (16-gauge) for the outside and 0.92mm (20-gauge) for the inside. The total thickness of the blade is approximately 53mm. The sliders that serve to guide the blades in the rails are made of steel angles of thickness 6.4mm and of length 305mm. The dimensions of these angles is proportional to the angles utilized to build the guiding rails.

Insulation: Each blade is garnished of a 51mm thick thermal insulation built out of polyurethane foam panels. The panels are CFC-free and conform to norm ASTM C-518 for thermal resistance. The thermal resistance factor RSI is 2.9 (R16). The exterior parts of the counterweight-boxes and door guides are insulated with the same product and with the same process as the blades. Exposed parts of the foams are protected by satin steel sheets 1.52mm (16-gauge).

Guiding rails: The rail guides comprise of steel angels made of 44W steel 50mm x 50mm x3.2mm welded to a support steel plate. One of the rails is fixed to the counterweight-box while the other is fixed to a 6.4mm thick support plate which is in turn fixed to steel stiffeners spaced 1.25m apart at maximum. The whole is provided with a bottom plate 6.4mm utilized for anchoring to the floor and is attached with the adjacent frame of the door. The superior extremities of the guiding device and counterweight-box are linked by a square tube insuring the alignment and the rigidity of the whole. Finally, the guiding device is equipped with adjustable limit switch pushbuttons.

Couterweightbox : The counterweight-box is built with a support steel plate 6.4mm and comprises a cage that serves the purpose of guiding and incorporating the counterweight elements. A removable protector covers the bottom part of the box at the desired height to open the possibility of removing the counterweight elements without congestion. The facade and the sides of the box are covered with steel sheets of 1.6mm thickness and up to 2.4m of height. The box comprises of horizontal stiffeners disposed at a maximum of 1.25m between each other. The whole also has a steel plate 6.4mm at its bottom for anchoring to the floor and is solidly fixed to the adjacent steel frame of the door. All elements are to be disposed so that the service loads can be taken by the counterweight and the guiding device.

Lintel : The lintel is made of a steel frame 1.9mm thick.

Finish : The finish comprises of one coat of anti-rust primer and two coats of paint finishes. The paint color is at the choice of the purchaser.

Balancing mechanism: The balancing mechanism is composed of a series of cables and counterweights. It has two frictionless devices localised on the superior part of the guiding mechanism. The device links the blades with its counterweight through two steel cables. The mechanism is connected to the electric operator via a driving chain of size 60. The driving blade is jointed to its counterweight by the means of two roller chains #60 and two cables in galvanized steel of diameter 6.4mm.

Each safety corner is composed of machined pulleys and steel sprockets mounted on a 32mm of diameter cold laminated steel keyed shaft. The diameter of the pulleys on the guide and counterweight sides are typically of 203mm. The cables utilized have a diameter of 6.4mm to give the necessary alignment to the counterweight elements inside the counterweightbox. The shafts are disposed on ball bearings. The pulleys are locked in place via shaft collars.

Safety mechanisms : To prevent the door from abruptly sliding down in the event of a break in the balancing mechanism, the driving blade is fitted with safety locking devices. The devices are maintained in open position by the existing tension in the chains linking the driving blade to its counterweight. In conjunction with this avant-garde safety innovation, Asselin also builds the door with an integrated pneumatic safety system on the bottom blade which shuts down the motion if an object conflicts with the closing path. A third safety system is also put in place which consists of a photoelectric detector which also makes the door re-open if someone was to cross the path while it is closing.

Weatherstrip : The lintel holds a neoprene weatherstrip. This provides a sealed horizontal joint while the door is closed. To ensure lateral joints seal, the rail guides are also fitted with weaterstrips with flexible neoprene garnishing. The inside border of the driving blade is fitted with an AGDS model pneumatic safety system procuring a safety border as well as a weatherstrip.

Electric operator : The electric operator, model GH, has a secondary shaft reduced by a ratio of 40:1 and is typically mounted laterally. It also has a chain hoist with manual disconnect function which allows for manual operation in the event of an electric outage.

The motor's power may vary, but for most project a 1-1/2 Hp unit is utilized, with voltage usually at 575 but possibly down to 240. The motor is also three phased, and rated NEMA premium or IE3 premium efficiency. The command unit, pushbuttons, relays, switches and other electrical hardware are conform to ACNOR and under box type EEMAC 1.

Finally, the control unit also has an integrated motor inverter as well as a thermal protection device to prevent overheating and overloading.

Waranty : The warranty for the product is valid for a period of twelve months from the date of installation by or supervised by our personnel.

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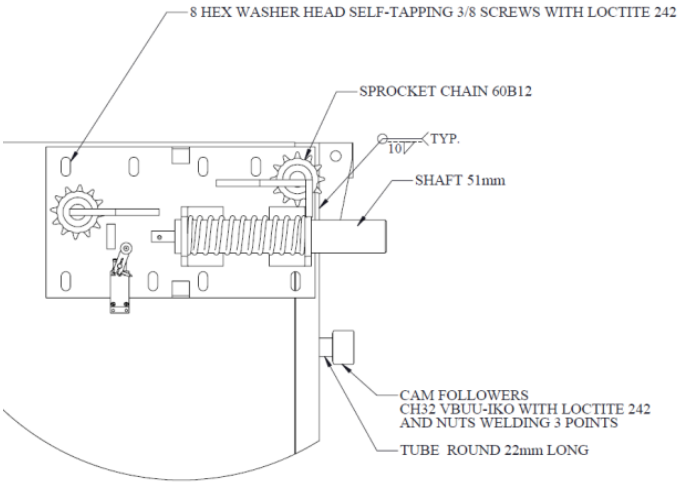

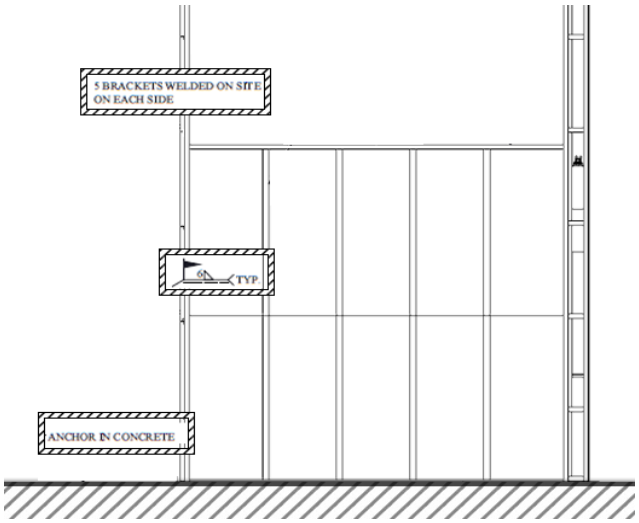

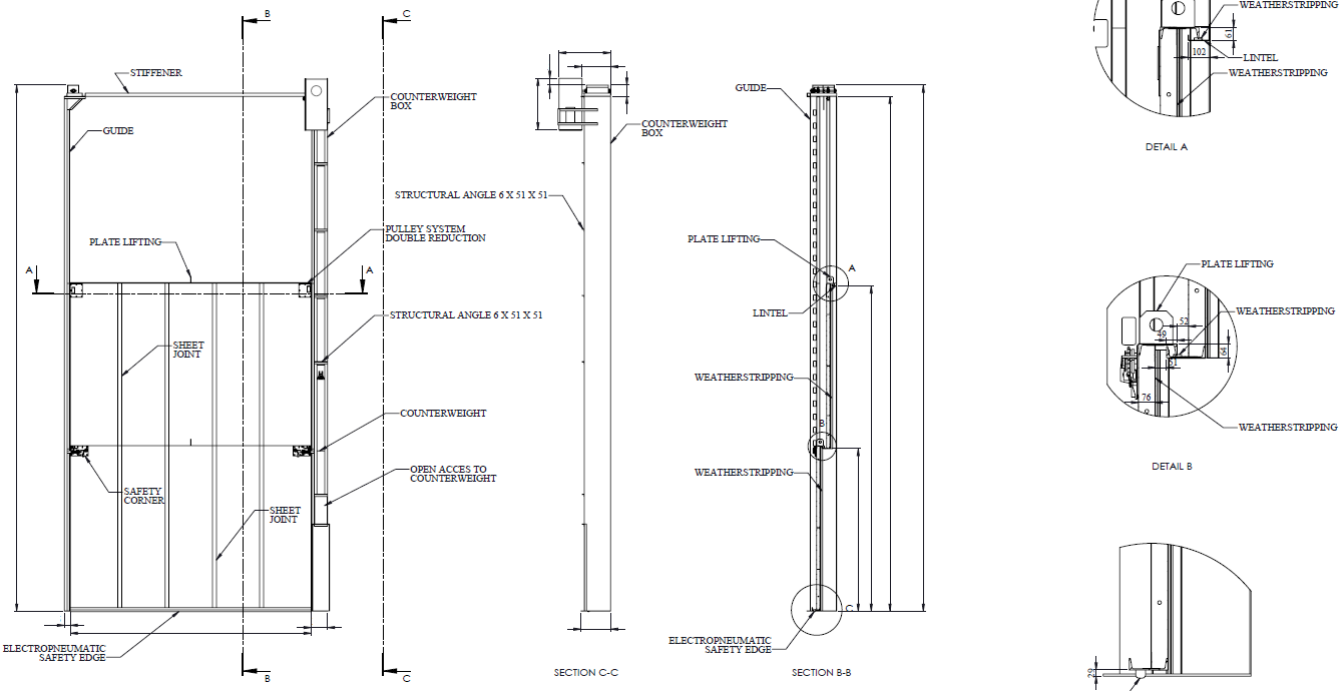

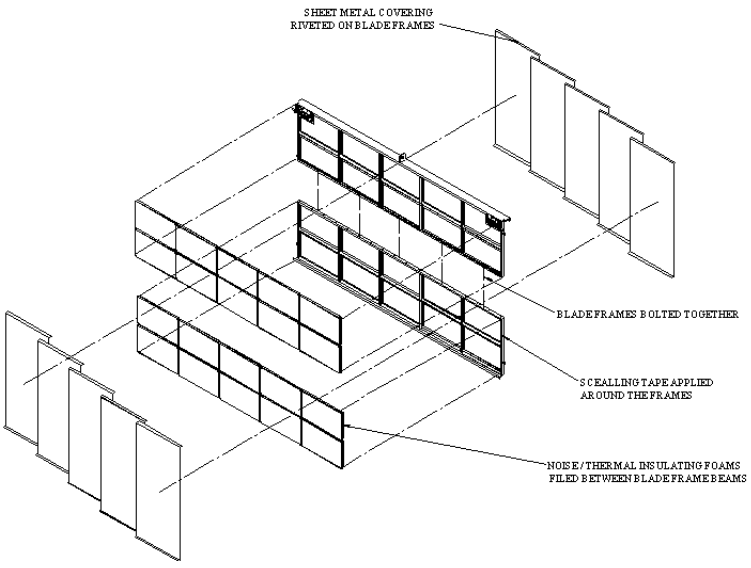

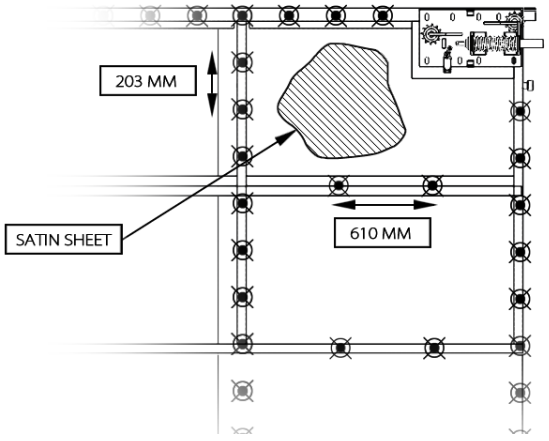

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