

SC INDUSTRIAL (2" THICK)

STANDARD SPECIFICATIONS

PART 1: GENERAL

1.01 WORK INCLUDED:

Doors shall be sectional overhead type SC INDUSTRIAL as manufactured by Steel-Craft Door Products Ltd. Each door shall be supplied as one complete unit including sections, track, brackets, rollers, struts, counterbalance mechanisms, hardware (list options) to suit the opening and headroom available.

1.02 RELATED WORK:

Opening preparation, miscellaneous or structural metal work, access panels, finish or field painting, field electrical wiring, wire, conduit, fuses, and disconnect switches are in the Scope of Work for other divisions or trades.

PART 2: PRODUCT

2.01 DOOR SECTIONS:

Will be roll formed of hot dipped galvanized stucco embossed steel. Sections will be manufactured by a continuous foamed-in-place polyurethane lamination process resulting in a steel- polyurethane-steel sandwich type construction. Steel-Craft Door Products Ltd. utilizes Doffasco, "PREMIER" Galvanized minimized spangle sheet "Pre-coat" commercial steel for the SC INDUSTRIAL polyurethane foam injected door as per the following specification.

Galvanized sheet steel: Commercial steel to ASTM A1008/A1008M CS Z001 G40 zinc coating.

Thickness: 0.016"

Finish: The finish will be exterior polyester applied to Dofasco "Premium" Galvanized

Exterior Face QC4654 White OR
 QC9577 Aluminum Pre-Paint

Interior Face QC4654 White OR
 QC9577 Aluminum Pre-Paint

Each section will be 2.0" thick (SC INDUSTRIAL) providing a calculated R- Value of 18.50 in accordance with industry established guidelines. SC INDUSTRIAL sections incorporate a mechanical interlock feature providing a positive mechanical lock on the exterior and interior skins, which also acts as a thermal break. Skins of sections will be ribbed for added strength and utilize ship-lap joints with continuous applied joint seal for weather-tight fit. End caps will be a minimum of 14 ga. hot-dipped galvanized steel. Bottom section is provided with a "U" shaped all weather vinyl seal to conform to small variations in the floor surface.

Vancouver

9727 188th Street
Surrey, BC V4N 3N2
Phone: 604.888.2550
Fax: 604.888.6133
Toll Free: 1.800.361.3667

Kelowna

#200, 144 Cambro Rd.
Kelowna, BC V1X 7T3
Phone: 250.765.4765
Fax: 250.765.3747
Toll Free: 1.800.880.0755

Edmonton

13504 St. Albert Trail
Edmonton, AB T5L 4P4
Phone: 780.453.3761
Fax: 780.454.1584
Toll Free: 1.800.463.3677

Calgary

#5, Ogden Road SE
Calgary, AB T2G 4N4
Phone: 403.255.3300
Fax: 403.253.8025
Toll Free: 1.800.561.9871

Toronto

6555 Kestrel Road
Mississauga, ON L5T 1P4
Phone: 905.564.3522
Fax: 905.564.3527
Toll Free: 1.800.465.7901

2.02 HARDWARE:

Galvanized hardware to include, graduated end roller hinges, intermediate hinges, adjustable top roller brackets, and bottom fixtures that have cable adjustment, 2" and 3" rollers to have 10 floating ball bearings in case hardened steel races. Doors shall be adequately reinforced with galvanized steel struts as required. Doors 14' wide and over, up to 24'2" receive the Steel-Craft Thermal Bow Strap to reduce thermal bowing caused by excessive temperature differentials between the exterior and interior door skins. Double end stiles supplied with two pairs of end roller hinges on doors over 17' wide. Long-stem roller shafts to extended fully through end roller hinges. Include double top fixtures.

Doors over 24'2" in width shall be reinforced with 5-5/8" x 16 gauge "Z" shaped struts. All doors over 1000 lbs. shall incorporate 11 ga. end hinges. Doors over 1300 lbs. shall be equipped with extra heavy duty top and bottom roller brackets, which accept 3/4" roller shafts.

2.04 TRACK:

2" or 3" steel track as required. Vertical tracks to be minimum 16 ga. galvanized steel; tapered and mounted for wedge-type closing. Horizontal tracks to be 14 ga. galvanized steel for 2" track and 12 ga. galvanized steel for 3" track. Vertical tracks to be bracket mounted or continuous angle mounted and fully adjustable for sealing door to jamb. Horizontal track to be adequately reinforced with formed galvanized C-channel.

2.05 SPRING COUNTERBALANCE:

Class II oil tempered ASTM A229 wire 10,000 cycle torsion springs (long-life springs of 25,000, 50,000, or 100,000 cycles may be specified and are recommended for high usage doors, when available). Cable drums and spring fittings will be made of die-cast high-strength aluminum. Continuous steel shaft (solid or tubular shaft as required by door size and operation). Galvanized lift cables with a minimum safety factor of 7 to 1.

Doors over 1300 lbs. utilize 1 1/4" diameter cross header shafts with standard bearings.

Doors over 1600 lbs. utilize 1 1/4" diameter cross header shafts with greasable end bearings in cast iron housings mounted to extra heavy bearing plates.

2.06 WINDLOAD

Doors will be designed to meet 20 PSF (0.96 Kpa) wind load.

2.07 LOCK

Interior mounted (left or right side) spring-loaded side bolt lock shall engage in track.

2.08 WEATHERSTRIP

Bottom of door to have U-shape all weather vinyl Durometer 65 seal designed to conform and seal at the floor surface. Steel vinyl side weather-strip shall be installed on vertical jambs for an effective seal against the door. Top of door to have flexible type all weather vinyl Durometer 65 seal designed to conform and seat at the horizontal lintel. Between sections to have a continuous O-shape all weather vinyl Durometer 65 seal at joint.

All weather vinyl parts are extruded from the highest quality virgin vinyl and comply with all the requirements specified in commercial standard.

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Edmonton, AB T5L 4P4
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#5, Ogden Road SE
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Fax: 403.253.8025
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2.09 PUSHER SPRINGS

Optional pusher springs are used on standard lift doors to initiate the closing from a fully open position.

2.10 FAIL SAFE BRACKETS

Optional TBRBFS-3 safety brackets are designed to arrest the rapid closing action of an overhead door in the event the lift cables have broken, or have come loose from the cable drums. The safety brackets are required in pairs, and are compatible with vertical lift, hi- lift, or standard lift hardware and where the balanced door weight does not exceed 2200 lbs., equipped with 3/4" cold rolled roller shafts and available for 3" track size only.

2.11 GLAZING

Full View section complete with aluminum rigid frame windows with Triple Glass Sealed Units (R=6.0). Size of windows vary with door section. View lite options also available in 23"x7" or 24"x12" or 34"x16" with Triple Glass Sealed Units.

2.12 OPERATION

1. Manual:

- Manually with pull chain; optional
- Manually with chain hoist (Recommended for door over 12' high); optional

2. Electrical Operator:

- The two basic types of operators are Trolley and Jackshaft operators.
- Trolley operators are designed for use on standard lift doors.
- Jackshaft operators are designed for use on high lift, or vertical lift doors.
(Recommend using Fail Safe Brackets with this type of operator).
- Electrical motors, controller units, remote push-button stations, relays and other electrical components to meet CSA and ULC approval.

2.13 OPTIONS

Pass Doors, Removable centre post, special colors, fail safe bottom roller brackets, track guards, etc.

PART 3: EXECUTION

3.01 INSTALLATION

Install the doors in accordance with Steel-Craft instructions and standards using an authorized Steel-Craft Door Products representative.

PART 4: TESTING

4.01 AIR INFILTRATION

Calculation of Air Infiltration: The air infiltration was measured over a wide range of test pressures with the door covered in poly and uncovered. The pressure differential between the high pressure side and the low pressure side was recorded over a range of pressures. The data was curve fit to determine the air infiltration rate with respect to differential pressure. Using the equations of the curves for the covered and uncovered cases, the air infiltration for 15 mph and 25 mph were calculated.

The air infiltration at 15 mph = 0.0526 ft³/min/ft² (24.2kph = 0.2672 L/s/m²)

The air infiltration at 25 mph = 0.1087 ft³/min/ft² (40.2kph = 0.5522 L/s/m²)

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