

# STEELCRAFT®

## Frame and Door Products



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# STEELCRAFT

**A leading manufacturer of steel doors and frames for commercial, industrial and institutional construction.**



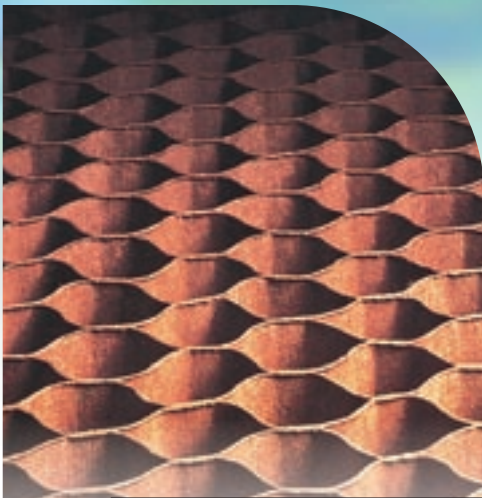
Steelcraft is devoted exclusively to the manufacture, service and continuous improvement of steel doors, frames and frame components. A measure of this commitment can be found in the great number of frame and door innovations that are now common to the industry and were pioneered, designed and developed by Steelcraft.

Our product guide is designed to provide architects, specifiers and distributors with all the necessary information to specify the right Steelcraft product for the application. In addition to providing the industry's highest quality frames, doors and components, Steelcraft has the widest selection of sizes, styles and designs to complement virtually any architectural requirement.



# Designed and Manufactured to Last

## – Right to the Core



### Honeycomb

*Steelcraft was the first to introduce honeycomb in standard metal doors (1957). With its unique properties, the honeycomb core enhances the structural integrity of the door while significantly reducing its weight. Honeycomb cores have significantly changed the hollow metal door industry.*

### Features

- High strength to weight ratio
- Uniform crushing strength
- Excellent impact resistance
- High shear strength
- Extreme durability
- Resists decay and pest destruction
- Insulation properties
- Available with wide range of fire ratings
- Versatility – permits modifications
- Uniform thickness ensures flat surface for lites, louvers, hardware, etc.

### Unique Operations

Steelcraft uses a kraft honeycomb material as the standard core for all flush (L-Series) doors. The honeycomb is subjected to several unique operations that enhance the characteristics of the core. If any of these operations are eliminated, the strength and durability of the core is compromised. The unique operations are as follows:

#### SANDING

Sanding ensures the honeycomb is the proper thickness to fit within the door panels. The sanding also increases the surface area to which the contact adhesive can be applied, therefore improving the lamination.

#### EXPANDING

Expanding the honeycomb ensures that the cell structure is at its optimum size. Honeycomb strength is determined by the cell size and structure.

#### RESIN IMPREGNATION

The kraft honeycomb material is impregnated with a phenolic resin. The phenolic resin enhances the honeycomb by making the material resistant to decay, insects and vermin. The resin also makes the honeycomb resistant to moisture. The amount of the impregnation is controlled to prevent a brittle condition.

#### CURING

The honeycomb must be fully cured to ensure the strength, moisture, decay, vermin resistance and bonding strength are achieved.

#### ADHESIVES

Contact adhesives are used to bond the impregnated honeycomb to the door panels. Since contact adhesives are designed to adhere to one another, the contact adhesive is applied to both door panels and to both faces of the honeycomb. By coating all surfaces in their entirety a true bond is achieved across the width and height of the door.

#### BONDING

A true bond is further ensured by passing the door and honeycomb assembly through a pinch roller process that exerts 500 pounds pressure per square inch.

### Optional Cores

The honeycomb core door mounted in a frame that has been fully weather-stripped will provide an efficient insulating assembly in 95% of all weather conditions. For the other 5%, Steelcraft provides two alternate cores, polystyrene and polyurethane, that are bonded into place using the same contact adhesives used with the honeycomb core.

#### POLYSTYRENE

Polystyrene solid core doors mounted in a frame that has been fully weather-stripped will provide an efficient insulating assembly for extreme weather conditions. The tested U-factor of the assembly is .23.

#### POLYURETHANE

Polyurethane solid core doors mounted in a frame that has been fully weather-stripped are designed to provide efficient insulating assembly for arctic weather conditions. The calculated U-factor of the door is .09.

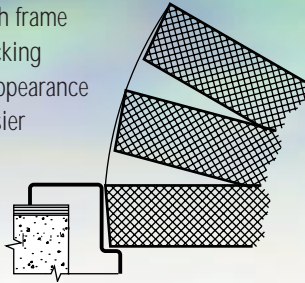
### Baked-On Prime Paint

All Steelcraft doors are supplied with a baked-on prime paint finish in accordance with ANSI A250.10. Before applying the primer, the doors are thoroughly cleaned and phosphatized to ensure proper paint adhesion. The primer is an attractive, environmentally friendly, neutral beige color and is suitable for field-applied finish paints.

# Steelcraft Design Features

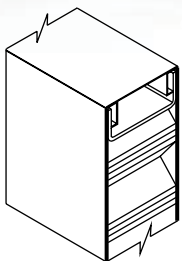
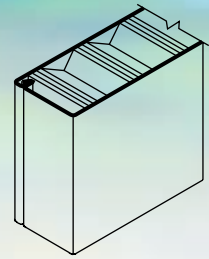
## ARCHITECTURAL BEVELED EDGE:

- Ensures easy operation with frame
- Eliminates binding and sticking
- Allows tighter fit for neat appearance
- Makes field installation easier



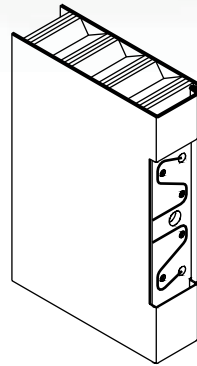
## VERTICAL SEAM:

- Continuous mechanical interlock for maximum rigidity
- Epoxy applied to inside of seam for additional strength and moisture barrier
- Hinge and lock edge seams are symmetrical



## HEAVY GAGE END CHANNELS:

14 gage (1.7mm) top and bottom reinforcing channels are standard in Steelcraft doors. The 14 gage (1.7mm) far exceeds the industry standard of 18 gage (1mm). The heavy channels are projection welded to both door panels. The door is stable and the door top and/or bottom are protected from abuse.

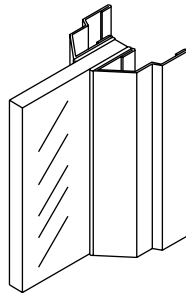


## UNIVERSAL HINGE REINFORCEMENT AND PLACEMENT:

The edge of Steelcraft doors is mortised and reinforced to accept the hinge leaf. The beveled edge and seam position the hinge so that filler plates are not required. The reinforcement is 7 gage (4.3mm) and is one of the strongest in the industry. It exceeds the industry standard of 10 gage (3.4mm) and is 28% thicker than the actual hinge. The preparation is designed to accept a standard weight or heavy weight hinge with a simple modification. The reinforcement is projection welded to the edge of the door.

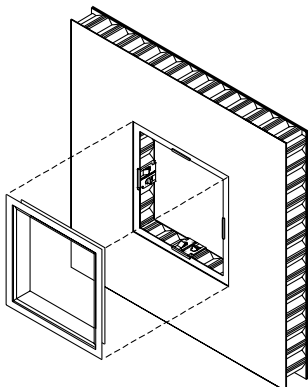
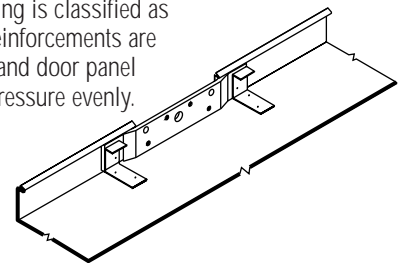
## RECESSED GLASS TRIM:

Steelcraft's DESIGNER TRIM® is a steel recess mounted (flush design) type with mitered, reinforced corners and concealed fasteners. The recess mounted trim allows exit devices to be mounted without interference with the glass trim. It is designed to be used on label and non-label doors and will accept 1/4"(6 mm) or 1/2"(13 mm) thick glass (glass thickness must be specified).



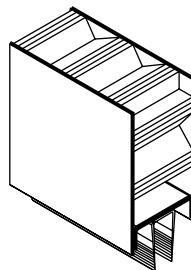
## HIGH FREQUENCY HINGE PREPARATION:

Additional strength can be added to the normal reinforcement when an opening is classified as high frequency. The added reinforcements are welded to the reinforcement and door panel distributing the torque and pressure evenly.



## DESIGNER TRIM:

DESIGNER TRIM has reinforced mitered corners, for a clean, neat and flush finish with the door face. That means less bulk, more strength and a sleeker look. Assembled by hand in our factory to spec, DESIGNER TRIM has universal interior and exterior applications. Not only can you choose your own color palate, it's now available in our GRAIN-TECH stainable wood grain finish as well.



## FAS-SEAL™ DOOR BOTTOM:

The Fas-Seal concealed double sweep conforms to sill variances, provides effective seal, is fire rated and meets the requirements of NFPA 105 where smoke control door openings are required.



*Hang Seng Bank, Hong Kong – L-Series Doors*

# Full Flush Doors

Full flush doors are defined as having no seams on the faces but seams are permitted on the edges. Steelcraft's L-, B-, LS- and CE-Series doors meet this specification. Steelcraft standard doors are manufactured from cold-rolled steel, or A60 hot dipped galvanized steel, and prime painted at the factory.

## L – SERIES

The L-Series door is a beveled edge honeycomb core door with a visible seam on both the hinge and lock edge. Optional cores are polystyrene and polyurethane.

## B – SERIES

The B-Series is a steel stiffened door with visible seams on the hinge and lock edges.

## CE – SERIES

CE-Series doors feature deeply embossed panels on both sides, creating the appearance of hand carved doors. The CE-Series doors include all the features of the L-Series door.

## GRAIN-TECH

GRAIN-TECH doors are L-Series doors produced with steel sheets that have been embossed to create a wood door appearance. GRAIN-TECH doors are available with an optional factory finish in six different standard color stains, and a factory-applied clear top coat with ultraviolet inhibitors. Special colors are available upon request. The look of wood with the durability and fire rated certification of a steel door. Truly the best of both worlds!

## RELATIVE COST

L18, 1-3/4", 30"x 7'0" flush door used as base of 100

L18	Flush, 18 gage,	100
L20-4	Flush, 20 gage,	87
LF20-4	Flush, 20 gage,	96
L18	Galvanized, Flush, 18 gage,	113
L18	UL Flush, 18 gage,	115
L18	Finished paint, Flush, 18 gage,	116
LF18	Full flush, 18 gage, (filled)	110
LW18	Full flush, 18 gage, (welded)	112
T18	Temperature Rise, 18 gage,	154
LS18	Stainless, Flush, 18 gage,	726
L16	Flush, 16 gage,	123
LF16	Flush, 16 gage, (filled)	133
LW16	Flush, 16 gage, (welded)	137
L14	Flush, 14 gage,	148
B18	Flush, 18 gage, steel stiffened,	125
B16	Flush, 16 gage, steel stiffened,	149
BW16	Flush, 16 gage, steel stiffened, (welded)	161
B14	Flush, 14 gage, steel stiffened,	173
CE20	Embossed, 20 gage,	105
CE18	Embossed, 18 gage,	122
CE16	Embossed, 16 gage,	139
L20	Stainable, 20 gage, factory finished	130
L18	Stainable, 18 gage, factory finished	143
A16	Stile & Rail, 16 gage, Full Glass,	166
AN16	Stile & Rail, 16 gage, Full Glass,	166

## STAINLESS STEEL

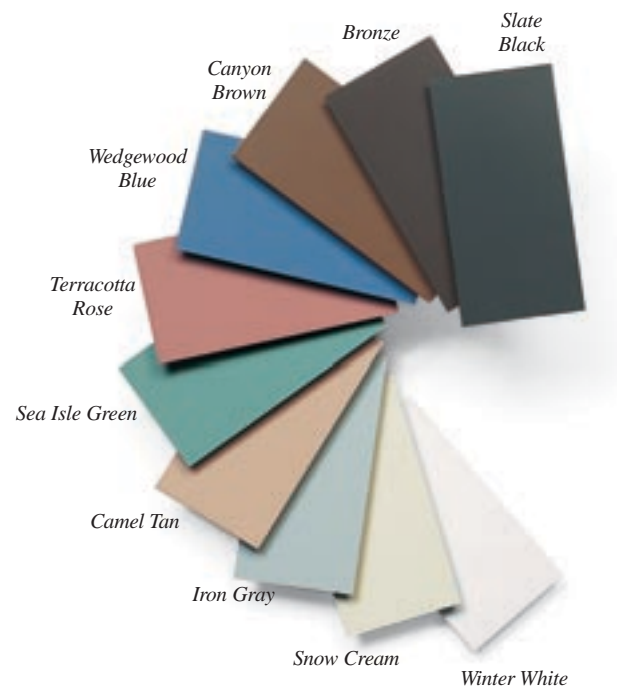
LS-Series doors are L-Series doors fabricated from type #304 or #316 stainless steel material (specify type). The stainless steel provides extra protection against corrosive chemicals and atmosphere.

## FINISH PAINT

L-Series doors are available with factory-applied finish paint. Ten standard colors as shown below are available. Special colors are available upon request. Factory finished doors and frames save job site preparation time, give a higher quality finish, and allow for decorator color selection.

Series	Core Material				Gage			
	HONEYCOMB	POLYSTYRENE	POLYURETHANE	STEEL STIFFENED	20	18	16	14
L	■	★	★		●	●	●	●
B				■		●	●	●
CE		■			●	●	●	
GRAIN-TECH	■	■	■		●	●	●	
Stainless	■	★	★			●		

■ = Standard Core  
★ = Optional Core Available



## L - Series

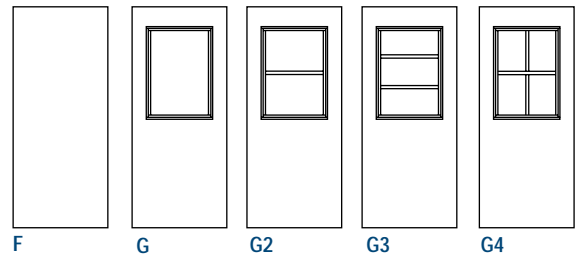
L20(.8mm) • L18(1mm) • L16(1.3mm) • L14(1.7mm)



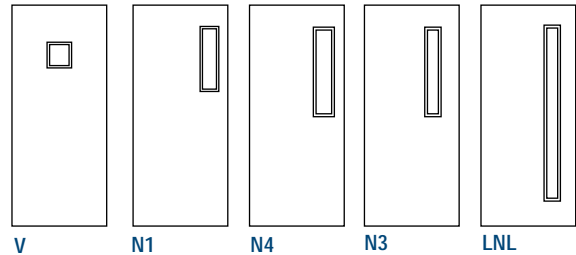
L-Series Door with Narrow Lite

Steelcraft L-Series doors are designed to meet architectural requirements for full flush doors. The L-Series door combines the strength and dimensional stability of steel with the structural integrity of the honeycomb core. The continuous bonding of core to metal provides an attractive, absolutely flat door, free of face welding marks. Tests have proven the L-Series door's high resistance to impact damage, low thermal conductivity and have validated the high STC ratings of this door.

### Full Flush and Half Glass Doors.



### Doors with Glass Lites.

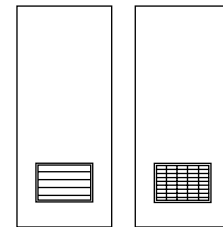


### Dutch Doors



Dutch

### Doors with Louvers or Grilles.



Louver

Grille

Width	Height			
	L20 B/L18, B/L16, B/L14, A16, AN16 1-3/4			CE20, CE18, CE16
	68 70 72	710 80	100	68 70
2'0" (610mm)	■			
2'4" (711mm)	■			
2'6" (762mm)	■			
2'8" (813mm)	■			■
2'10" (864mm)	■			■
3'0" (914mm)	■	■	■	■
3'4" (1016mm)		■	■	■*
3'6" (1067mm)		■	■	■*
3'8" (1118mm)		■	■	
3'10" (1168mm)		■	■	
4'0" (1219mm)		■	■	

\*Not available in 20 gage

### Specifications

Door thickness:	1-3/4"	(45mm)
Standard heights:	6'8"-7'0"	(2032mm-2134mm)
	7'2"-7'10"	(2184mm-2388mm)
	8'0"-10'0"	(2438mm-3048mm)
Standard widths:	increments of 2" (50mm) from 1'6" (457mm) to 4'0" (1219mm)	

## B - Series

B18 (1mm) • B16 (1.3mm) • B14 (1.7mm)



B-Series Flush Door



The B-Series door is a steel stiffened door incorporating all the design features of the L-Series door. The stiffeners are welded to the face sheets 4" (102mm) on center vertically and are located 6" (152mm) on center horizontally. The void areas between the stiffeners are filled with fiberglass.

High gloss paints should be avoided especially on B-Series doors. The welds used to hold the stiffeners in position will be very visible when high gloss paints are used.

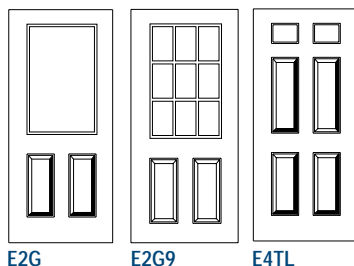
### Specifications

Door thickness:	1-3/4"	(45mm)
Standard heights:	6'8"	(2032mm)
	7'0"-7'2"	(2134mm-2184mm)
	7'10"-8'0"	(2388mm-2438mm)
	10'0"	(3048mm)
Standard widths:	increments of 2" (50mm) from 1'6" (457mm) to 4'0" (1219mm)	

## CE - Series

CE20 (.8mm) • CE18 (1mm) • CE16 (1.3mm)

### Glass Lites Designs

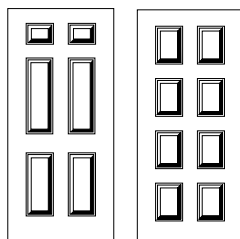


E2G

E2G9

E4TL

### Embossed Panel Designs



E21

E120



CE-Series E21 – Six Panel Door

### Specifications

Door thickness:	1-3/4"	(45mm)
Standard heights:	6'8"-7'0"	(2032mm-2134mm)
Standard widths:	increments of 2" (50mm) from 2'8" (813mm) to 3'6" (1067mm)	

Steelcraft CE-Series doors feature deeply embossed panels on both sides. Six panel, eight panel and cross buck designs are patterned after traditional high quality, wood panel doors, but add the durability, fire protection and long-lasting operation of steel doors. The polystyrene core with honeycomb around the perimeter gives Steelcraft decorative doors added strength and makes the doors energy efficient. Decorative doors are manufactured in either 20, 18 or 16 gage hot dipped A40 galvanized steel, conforming to ASTM A653 specifications.

\*Note doors over 3'0" (1219mm) limited to 18 ga. (1mm) 6 panel design.

*Texas Gambling Hall, Las Vegas, NV*



# GRAIN-TECH Series

Woodgrain Stainable Steel Doors

Even the most discriminating have to take a second look at our GRAIN-TECH Series stainable steel doors. Now, the beauty of real wood has been rendered amazingly close, in both color and finish. Our exclusive embossed grain and staining process simulates wood with factory colors from Ash to Walnut. Specially formulated primer accepts stain so colors can be matched accurately to existing wood treatments.

*Unlike laminated or solid wood doors, the GRAIN-TECH Series is less susceptible to damage, and will never warp, crack, peel or bow. Plus, it meets the fire rating requirements of UL 10C, UBC 7-2 and NFPA 252 for 20-minute to 3-hour doors. A large variety of hardware preparations can be made enabling the use of concealed or surface locks, exit devices and hinges; for a safer, stronger and more secure door—inside and out.*



GRAIN-TECH® Doors

## Specifications

Door thickness:	1-3/4"	(45mm)
Standard heights:	6'8"	(2032mm)
	7'0"-7'2"	(2134mm-2184mm)
	7'10"-8'0"	(2388mm-2438mm)
	10'0"	(3048mm)
Standard widths:	increments of 2"(50mm) from 1'6"(457mm) to 4'0"(1219mm)	

## IDEAL USES:

- Schools
- Hospitals
- Offices
- Nursing Homes
- Apartment Buildings
- Dormitories

20, 18 and 16 gage doors are available with an embossed grain pattern that can be field or factory stained to simulate a wood door. The door can be non-labeled or labeled flush design or can have Steelcraft glass cutouts. The DEZIGNER TRIM used in glass doors is supplied in the stainable steel material.





*Bausch & Lomb Lab, Tampa, FL - Stainless Steel Doors & Frames*

*American Building Company - Textured Steel Doors*



Steelcraft LS-Series Stainless Steel Doors are designed to meet and exceed the harsh environmental exposures like: chemicals, water, moisture and others. Indoor swimming pool areas, laboratories, bottling plants, food processing plants and all tropical environments are ideal for the Steelcraft Stainless Steel Door. LS-Series doors are L-Series doors fabricated from 18 gage type #304 or #316 (specify type) stainless steel material. The hardware reinforcements and the end channels are also fabricated using stainless steel material. The door is standard with a number 4 polish on both faces and the edges.

## Specifications: Door and Frame

Door thickness:	1-3/4"	(45mm)
Standard heights:	6'8"	(2032mm)
	7'0"-7'2"	(2134mm-2184mm)
	7'10"-8'0"	(2388mm-2438mm)
Standard widths:	increments of 2"(50mm)	
	from 1'6"(457mm) to 4'0"(1219mm)	

Steelcraft FS-Series Frames are designed for use in wood stud, steel stud and masonry walls. These frames are 16 gage type #304 or #316 #4 Finish Stainless Steel material. The hardware reinforcements and anchors are also fabricated from stainless steel. Construction details are similar to those shown in the Frame section of this Product Guide.



Pair of LS-Series Stainless Steel Doors and FS-Series Frames

*Georgia Dome, Atlanta, GA –  
Stille & Rail Doors, Architectural Stick System*



# Stile & Rail Doors

A16 (1.3mm) • AN16 (1.3mm) • S16 (1.3mm)

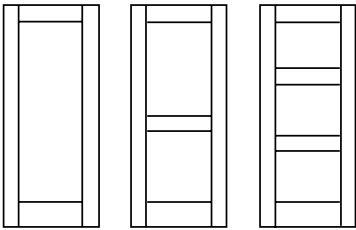
A16 and AN16 doors are made of 16 gage (1.3mm), 1-3/4" (45mm) thick tubular stiles and rails. The stiles extend the full height of the door. The rails are mechanically joined to the stiles forming a neat seam on the face. The A16 and AN16 doors are available as FG (full glass), FG2 (2 glass areas) or FG3 (3 glass areas) only.

## A16, AN16 FEATURES:

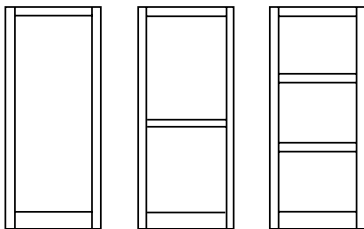
- Beveled edges
- 14 gage (1.7mm) top and bottom channels
- 5-1/4" (133mm) or 3" (76mm) top rail hinge and lock stiles
- Universal hinge preparation for standard or heavy weight hinges
- 10" (253mm) high bottom rail

S16 doors are made of 16 gage (1.3mm), 1-3/4" (45mm) thick tubular steel stiles and rails. All corners are arc welded and ground smooth. The center panel is 1-3/4" (45mm) thick and is made of 18 gage (1mm) steel sheets bonded to a honeycomb core. The panel is mechanically joined to the stiles and rails forming a neat seam on the face. S16 doors are available with the flush panel only.

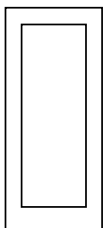
### A16 (Standard Stile)



### AN16 (Narrow Stile)



### S16



Stile & Rail Doors – Architectural Stick System

## Specifications

Door thickness:	1-3/4"	(45mm)
Standard heights:		
<b>A &amp; AN</b>	6'8"-7'0"	(2032mm-2134mm)
	7'2"-7'10"	(2184mm-2388mm)
	8'0"	(2438mm)
<b>S16</b>	6'8"-7'0"	(2032mm-2134mm)
	7'2"-7'10"	(2184mm-2388mm)
	8'0"-10'0"	(2438mm-3048mm)
Standard widths:	increments of 2"(50mm)	
	from 1'6"(457mm) to 4'0"(1219mm)	



*French Hall, University of Cincinnati,  
Cincinnati, Ohio – Architectural Stick System*



*Steelcraft manufactures a wide variety of frames in all jamb depths for virtually any wall condition and entry requirement.*

## FLUSH FRAMES

Flush (**F-**, **FE-**, **FN-** and **FS-Series**) frames are designed to be installed as part of the wall framing sequence for exterior and interior walls.

## DRYWALL FRAMES

Drywall (**DW-** and **K-Series**) frames are designed to be installed in rough openings after the wall is up. They can be installed in minutes and can be relocated without damage to the frame.

## MULTIPLE USE FRAMES

Multiple Use (**MU-Series**) frames have a jamb profile similar to drywall frames but are designed to be installed as part of the wall framing sequence.

## RELATIVE COST

A 16 gage (1.3mm) 1-3/4" (45mm), flush frame 3'0" (914mm) x 7'0" (2134mm), 5-3/4" (146mm) jamb depth, prime painted, CRS knocked down construction (KD) was used as a base of 100.

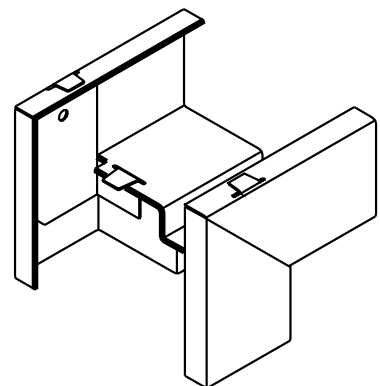
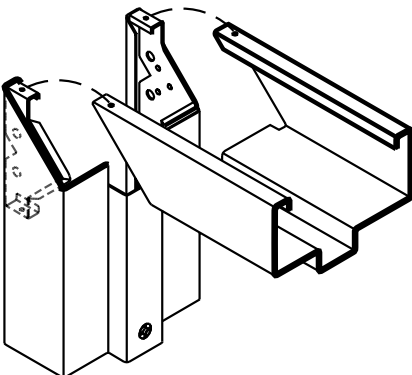
F16-4	CRS	16 gage, 1-3/4 KD	100
F16-4	CRS 7'2"	16 gage, 1-3/4 KD	102
F16-4	Galvannealed	16 gage, 1-3/4 KD	114
F16-4	Arc-welded	16 gage, 1-3/4	163
F16-4	Label	16 gage, 1-3/4 KD	116
F16-4	PS-074**	16 gage, 1-3/4 KD	124
FS16-4	Stainless Steel	16 gage, 1-3/4 KD	1452
FN16-4	CRS	16 gage, 1-3/4 KD	100
F18-8	CRS	18 gage, 1-3/8 KD	90
F14-4	CRS	14 gage, 1-3/4 KD	123
F12-4	CRS	12 gage, 1-3/4 KD	161
DW16-4	Drywall	16 gage, 1-3/4 KD	102
MU16-4	Multi-use	16 gage, 1-3/4 KD	102
GRAIN-TECH	Field-stained		124

\*\*Weatherstrip installed.

## Corner Connection

### DRYWALL FRAME

Drywall frame corners lock together as the frame is installed. The tab design prohibits the head from raising and keeps the head and jamb members in the same plane.



### FLUSH FRAME

Flush frame corners are designed to lock together by bending over four integral tabs. The frame can also be welded and ground smooth.

# Flush Frames

F18 (1mm) • F16 (1.3mm) • F14 (1.7mm) • F12 (2.5mm) • FS16 (1.3mm) • FN18 (1mm)  
FN16 (1.3mm) • FN14 (1.7mm) • FE16 (1.3mm) • FE14 (1.7mm) • MU18 (1mm) • MU16 (1.3mm)

*Steelcraft F-, FE-, FN-, FS- and MU-Series Frames are designed for common walls such as wood stud, steel stud and masonry. MU18 and 16 gage only frames are available in 18 & 16 gage, cold-rolled steel (CRS) or A60 hot dipped galvanized steel. FS Frames are 16 gage type #304 or #316 stainless steel.*

## RECOMMENDED USAGE

F18 (1mm), FN18 (1mm) or MU18 (1mm) for 1-3/8" (35mm) or 1-3/4" (45mm) thick hollow core wood doors only.

F16 (1.3mm), FN16 (1.3mm), F14 (1.7mm), FN14 (1.7mm), F12 (2.5mm) or MU16 (1.3mm) for 1-3/4" (45mm) thick doors. FE16 (1.3mm) or FE14 (1.7mm) for 1-3/4" (45mm) thick double egress doors.

Galvanized steel is recommended where atmospheric conditions require extra protection.

All frames, except 12 gage (2.5mm), are supplied with rubber bumpers installed, (3) per strike jamb and (2) per double head for pair of doors. F12 (1.5mm) frames are supplied with loose pressure sensitive bumpers for field application by others.

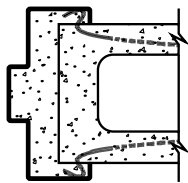
## STAINLESS STEEL FS-SERIES

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

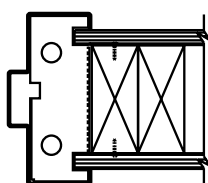
Type #316 (optional) stainless steel is recommended for swimming pool areas where high concentrations of chlorine are used.

## Typical Wall Conditions

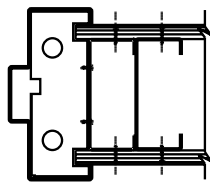
### F-SERIES (FE-SERIES SIMILAR)



Wrap Around Block Wall

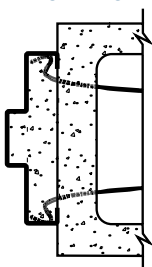


Wood Wall Stud



Closed Steel Stud Wall

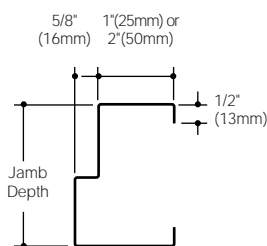
### FN-SERIES



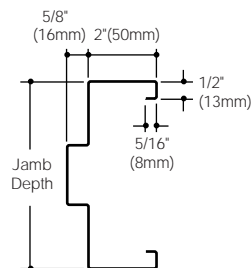
Butted Masonry

## Profiles and Jamb Depths

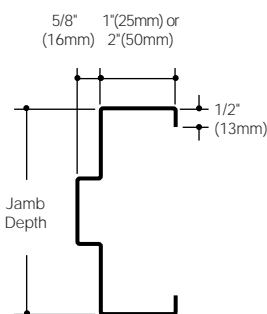
Standard profiles are shown. Custom profiles are available.



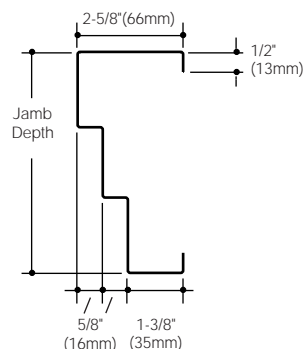
Single Rabbet – F-Series



Double Rabbet – MU-Series



Double Rabbet – F- and FS-Series



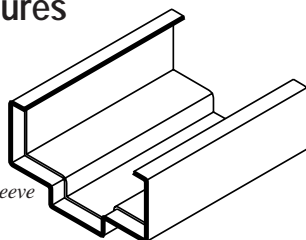
Double Egress – FE-Series

## Specifications

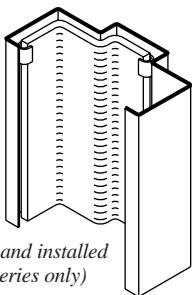
Door thickness:	1-3/4" (45mm)	1-3/8" (35mm)
Standard heights:	6'8" (2032mm)	7'10" (2184mm)
	7'0" (2134mm)	8'0" (2438mm)
	7'2" (2184mm)	10'0" (3048mm)
Standard widths:	increments of 2" (50mm) from 1'6" (457mm) to 8'0" (2438mm)	

## Optional Design Features

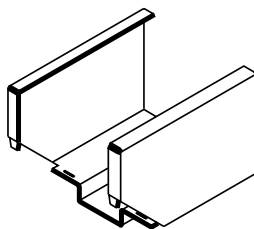
14 gage (1.7mm)  
Closer Reinforcing Sleeve



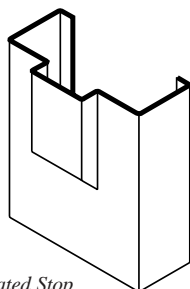
Frames for  
Lead Lining  
(Lead supplied and installed  
by others – F-Series only)



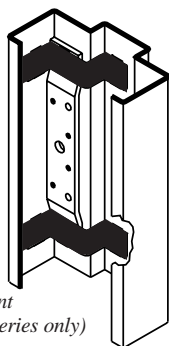
4" (100mm) Head



Terminated Stop  
(F-, FN-, MU- and DW-Series only)



10 gage (3.4mm)  
High Frequency  
Hinge Reinforcement  
(F-, FE- and MU-Series only)



## Anchors



Closed Steel Stud Anchor



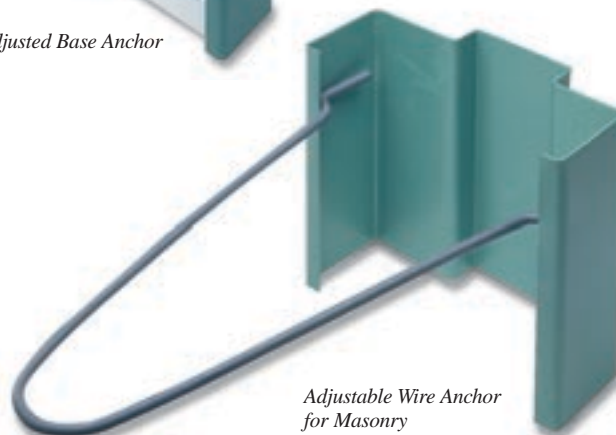
Wood Stud Anchor



Open Steel Stud Anchor



Adjusted Base Anchor



Adjustable Wire Anchor  
for Masonry



*Treasure Island Hotel & Casino, Las Vegas, NV –  
Drywall Frames*

# Drywall EASY-SET® Frames

DW18 (1mm) • DW16 (1.3mm) • K18 (1mm) • K16 (1.3mm)

Drywall EASY-SET frames are designed for drywall construction using wood studs or steel studs. EASY-SET frames are available manufactured from cold-rolled steel (CRS) or A60 hot dipped galvanized steel.

## RECOMMENDED USAGE

DW18 (1mm) and K18 (1mm) for 1-3/8" (35mm) or 1-3/4" (45mm) thick hollow core wood and 20 gage (.8mm) steel doors only.

DW16 (1.3mm) and K16 (1.3mm) for 1-3/4" (45mm) thick doors.

DW-Series and K-Series frames are supplied with rubber bumpers installed, (3) per strike jamb and (2) per head for pairs of doors.

Ceiling height frames with transom panels and borrowed lite frames are available in the DW-Series and K-Series frames as options.

## FRAMES

- DW18 (1mm), DW16 (1.3mm), K18 (1mm) and K16 (1.3mm)  
DW- and K-Series frames are available in 18 gage (1mm) or 16 gage (1.3mm) cold-rolled or A60 hot dipped galvanized steel.



Drywall Frames –  
Treasure Island  
Hotel & Casino,  
Las Vegas, Nevada

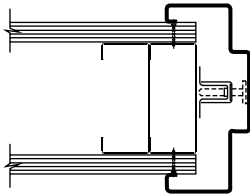
## Specifications

Door thickness:	1-3/4"-1-3/8"	(45mm-35mm)
Standard heights:	6'8"-7'0"	(2032mm-2134mm)
	7'2"-7'10"	(2184mm-2388mm)
	8'0"	(2438mm)
Standard widths:	increments of 2"(50mm)	
	from 1'6"(457mm) to 8'0"(2388mm)	

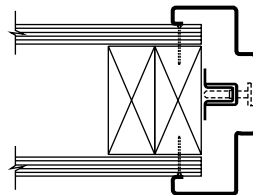
## DW- & K-Series

DW18 (1mm) • DW16 (1.3mm) • K18 (1mm) • K16 (1.3mm)

## Typical Wall Conditions



Steel Stud  
3-5/8"(92mm) Steel Stud With  
5/8"(16mm) Gypsum Board



Wood Stud  
3-1/2"(88mm) Wood Stud With  
5/8"(16mm) Gypsum Board

## Anchors



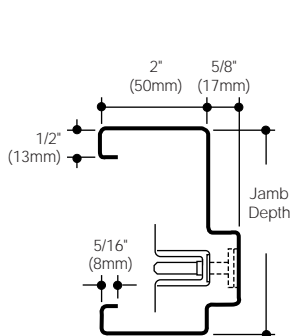
Lock-In Base Anchor



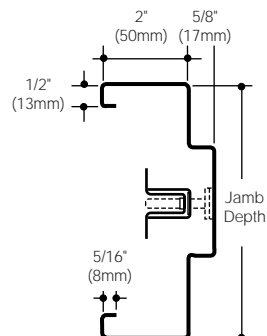
Compression Anchor

## Profiles and Jamb Depths

Standard profiles shown. Custom profiles are available.



Single Rabbet



Double Rabbet



Quick and Easy Base Anchor



Optional Security Anchor

A photograph of the Mercy Hospital in Pittsburgh, PA, featuring a prominent brick building with a tall, modern glass and steel tower. The building has multiple stories with many windows. In the foreground, there is a landscaped area with green grass, small trees, and a black signpost with white text and arrows. The sky is clear and blue.

*Mercy Hospital, Pittsburgh, PA –  
Architectural Stick System*

# Architectural Stick System

*Designers can give full expression to architectural considerations for exterior walls, window walls, store fronts, entrances, end walls, interior partitions, transom and sidelites using Steelcraft's pre-engineered architectural stick system. The component nature of the stick system provides virtually unlimited structural and aesthetic design possibilities. Stick system frames are fabricated from pre-engineered components and are locally assembled to your individual requirements by factory-trained Steelcraft distributors.*

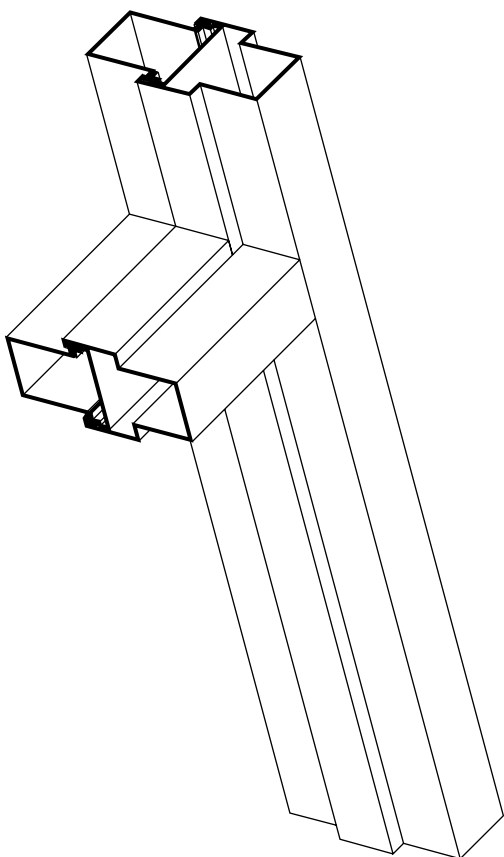
Sticks are manufactured from 16 gage (1.3mm) or 14 gage (1.7mm) cold-rolled or A60 galvanized steel.

All standard closed section sticks include a full length 16 gage (1.3mm) reinforcement welded into position.

The unique mullion, a vital part of the original stick concept for window wall systems pioneered by Steelcraft, is designed to provide the structural characteristics not found in other systems. The full length 16 gage (1.3mm) reinforcing channel is an integral part of Steelcraft mullions.

## FEATURES:

- 1"(25mm) or 2"(50mm) face sections
- 16 gage (1.3mm) or 14 gage (1.7mm) steel
- Cold-rolled or hot dipped galvanized steel
- Baked-on primer
- Single or double rabbetted
- Welded assembled
- No visible welds
- Uniform profile
- UL listed



Architectural Stick System – Mercy Hospital, Pittsburgh, PA

# Steelcraft Fire Rated Doors

Positive and Negative Pressure Rated

Negative Pressure Rated

## MAXIMUM GLASS AREA FOR LABELED DOORS

Label	A	B	C	D*	E*	
Rating	3 hours	1-1/2 hours	3/4 hour	1-1/2 hours	3/4 hour	20 minute
Max Glass area	100 sq. in. <sup>1</sup> (0.6 sq. m)	100 sq. in. <sup>2</sup> (0.6 sq. m)	1296 sq. in. (0.84 sq. m)	None	1296 sq. in. (0.84 sq. m)	as tested

\*Exterior Rated Openings <sup>1</sup>Firelite Glass <sup>2</sup>[1296 sq. in. (84 sq. m)] with Firelite glass.

## SINGLE DOORS

## LABEL RATING

Doors	Max. Size	3 hours	1-1/2 hours	3/4 hour	1-1/2 hours	3/4 hour	20 minute
L20	3'0" x 7'2" (914mm x 2184mm)	A	B	C	D	E	✓
L20	3'0" x 8'0" (914mm x 2438mm)		B	C	D	E	✓
L18, L16	4'0" x 8'0" (1219mm x 2438mm)		B	C	D	E	✓
L18, L16	4'0" x 10'0" (1219mm x 3048mm)	A	B	C	D	E	✓
L14	4'0" x 8'0" (1219mm x 2438mm)	A	B	C	D	E	✓
B18, B16	4'0" x 10'0" (1219mm x 3048mm)	A	B	C	D	E	✓
B14	4'0" x 8'0" (1219mm x 2438mm)	A	B	C	D	E	✓
A16, AN16	4'0" x 8'0" (1219mm x 2438mm)			C		E	✓
T20, T18 T16, T14	4'0" x 8'0" (1219mm x 2438mm)	A 250° Temp. Rise	B 250° Temp. Rise				
CE20, CE16	3'0" x 7'0" (914mm x 2134mm)	A	B	C	D	E	✓
CE18	3'6" x 7'0" (1067mm x 2134mm)	A	B	C	D	E	✓

## PAIR OF DOORS

## LABEL RATING





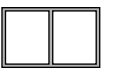
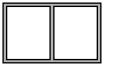
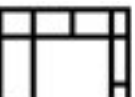
Doors	Max. Size	3 hours	1-1/2 hours	3/4 hour	1-1/2 hours	3/4 hour	20 minute
L20	6'0" x 7'2" (1892mm x 2184mm)		B	C	D	E	✓
L18, L16	8'0" x 8'0" (2438mm x 2438mm)	A	B	C	D	E	✓
L18, L16	8'0" x 10'0" (2438mm x 3048mm)		B	C	D	E	✓
L18, L16	8'0" x 7'2" (2438mm x 2184mm)		B without astragal	C without astragal	D without astragal	E without astragal	✓ without astragal
L14	8'0" x 8'0" (2438mm x 2438mm)	A	B	C	D	E	✓
B18, B16	8'0" x 10'0" (2438mm x 3048mm)	A	B	C	D	E	✓
B14	8'0" x 8'0" (2438mm x 2438mm)	A	B	C	D	E	✓
A16, AN16	8'0" x 8'0" (2438mm x 2438mm)			C		E	✓
T20, T18 T16	8'0" x 8'0" (2438mm x 2438mm)	A 250° Temp. Rise	B 250° Temp. Rise				
CE20	6'0" x 7'0" (1892mm x 2134mm)		B	C	D	E	✓
CE18	7'0" x 7'0" (2134mm x 2134mm)	A	B	C	D	E	✓
CE16	6'0" x 7'0" (1892mm x 2134mm)	A	B	C	D	E	✓

L- and B-Series doors are available with the seams filled or welded. Doors over 8'0" (2438mm) high require 2 pair of heavy weight hinges and are limited to 100 sq. in. (0.06 sq. m) of glass.

NOTE: Consult the factory or an authorized Steelcraft distributor for specific fire-rated applications.

## FRAME TYPE

## FRAME SIZE

<b>Three Sided Frames</b>		<b>Max. Door Size</b>	<b>Max. Rating</b>	<b>Jamb Depths</b>		
	<b>F16, FN16 F14, FN14</b>	4'0" x 10'0" single (1219mm x 3048mm) 8'0" x 10'0" pair (2438mm x 3048mm)	3 hours	Min. 3" (75mm) Max. 14" (350mm)		
<b>Three Sided Frames</b>		<b>Max. Door Size</b>	<b>Max. Rating</b>	<b>Jamb Depths</b>		
	<b>DW16, K16</b>	4'0" x 8'10" single (1219mm x 2692mm) 8'0" x 10'0" pair (2438mm x 3048mm)	1-1/2 hours	Min. 4-3/4" (121mm) Max. 9" (229mm)		
<b>Transom Frames with panel without bar</b>		<b>Max. Overall Size</b>	<b>Max. Door Size</b>	<b>Max. Rating</b>	<b>Jamb Depths</b>	<b>Max. Panel Size</b>
	<b>F16, F14, MU16</b>	4'4" x 11'6" single (1319mm x 3505mm) 8'4" x 11'6" pair (2538mm x 3505mm)	4'0" x 8'0" single (1219mm x 2438mm) 8'0" x 8'0" pair (2438mm x 2438mm)	3 hours	Min. 4-3/4" (121mm) Max. 12-3/4" (324mm)	8'0" x 4'0" (2438mm x 1219mm)
<b>Transom Frames with bar</b>		<b>Max. Overall Size</b>	<b>Max. Door Size</b>	<b>Max. Rating</b>	<b>Jamb Depths</b>	<b>Max. Panel Size</b>
	<b>F16, F14</b>	4'4" x 11'7" single (1319mm x 3531mm) 8'4" x 11'7" pair (2538mm x 3531mm) without mullion 8'6" x 11'7" (2590mm x 3531mm) with mullion	4'0" x 10'0" single (1219mm x 3048mm) 8'0" x 10'0" pair (2438mm x 3048mm)	1-1/2 hours with panels <sup>2</sup> 3/4 hour <sup>2</sup> with glass	Min. 4-3/4" (121mm) Max. 12-3/4" (324mm)	8'0" x 3'2" (2438mm x 965mm)
<b>Borrowed Lite Frames</b>		<b>Max. Overall Size</b>		<b>Max. Rating</b>	<b>Jamb Depths</b>	<b>Max. Glass Area</b>
	<b>F16, F14, MU16</b>	13'2" x 11'7" single (4013mm x 3531mm)		3/4 hour <sup>2</sup> and 20 min.	Min. 4-3/4" (121mm) Max. 12-3/4" (324mm)	<b>3/4 hour</b> 1296 sq. in. (0.84 sq. m) with 5/8" (16mm) stops width or height cannot exceed 4'6" (1372mm) <b>20 min.</b> 5268 sq. in. (3.40 sq. m) with 5/8" (16mm) stops width or height cannot exceed 9'1-3/4" (2788mm)
<b>Borrowed Lite Frames</b>		<b>Max. Overall Size</b>		<b>Max. Rating</b>	<b>Jamb Depths</b>	<b>Max. Glass Area</b>
	<b>DW16</b>	4'4" x 9'0" single (1319mm x 2743mm)		20 min.	Min. 4-3/4" (121mm) Max. 9" (229mm)	3307 sq. in. (2.13 sq. m) with 5/8" (16mm) stops max. 3'10-3/4" (1187mm) x 5'10-3/4" (1797mm)
<b>Transom/Sidelite Frames</b>		<b>Max. Overall Size</b>	<b>Max. Door Size</b>	<b>Max. Rating</b>	<b>Jamb Depths</b>	<b>Max. Panel Size</b>
	<b>F16, F14, MU16</b>	13'2" x 11'7" single (4013mm x 3531mm)	4'0" x 10'0" <sup>1</sup> single (1219mm x 3048mm)	1-1/2 hours with panel	Min. 4-3/4" (121mm) Max. 12-3/4" (324mm)	Transom or side panel 8'0" x 3'2" (2438mm x 965mm)
						<b>Max. Glass Area</b>
						<b>3/4 hour</b> 1296 sq. in. (0.84 sq. m) with 5/8" (16mm) stops <b>20 min.</b> 5268 sq. in. (3.40 sq. m) with 5/8" (16mm) stops width or height cannot exceed 9'1-3/4" (2788mm)

<sup>1</sup> Maximum door height for positive pressure may vary.

<sup>2</sup> One hour rating with Firelite glass.

Interior dividing members may have a minimum 1" (25mm) face.

Maximum size frame available will vary with wall construction.  
See Steelcraft Spec Manual for exact sizes.

Approved glazing required in all fire-rated products.

# Architectural Specifications

## Part One: General

### 1.01 RELATED WORK

Specifications apply to steel doors, steel door frames, door hardware and steel frame components such as sidelites, borrowed lites, transom frames and architectural stick assemblies as shown on architects' plans and schedules, as manufactured by Steelcraft, Cincinnati, Ohio, and as conforming to ANSI A250.8-1998 (SDI-100).

### 1.02 WORK NOT INCLUDED

Work not included: Installation of frames and doors, glass and glazing, field painting of prime painted doors and frames, door and frame hardware, protection at the building site of items furnished under this specification.

### 1.03 SUBMITTALS

Doors, frames, hardware and steel frame components shall be as shown on shop drawings and schedules and shall be approved by the architect before fabrication.

### 1.04 TEST REPORTS AND LABELING COMPLIANCE

For details on testing procedures and results contact Steelcraft and request Steelcraft's Spec Manual.

### 1.05 DELIVERY, STORAGE AND PROTECTION

- A. Storage of Doors: Doors shall be stored in an upright position under cover. Place the units on at least 4" (101.6 mm) wood sills on floors in a manner that will prevent rust and damage. Do not use non-vented plastic or canvas shelters, which create humidity, chamber and promote rusting. If the corrugated wrapper on the door becomes wet, or moisture appears, remove the wrapper immediately. Provide a 1/4" (6.35 mm) space between the doors to promote air circulation.
- B. Storage of Frames: Frames shall be stored under cover on 4" (101.6 mm) wood sills on floors in a manner that will prevent rust and damage. Do not use non-vented plastic or canvas shelters, which create humidity chamber and promote rusting. Assembled frames shall be stored in a vertical position, five units maximum in a stack. Provide a 1/4" (6.35 mm) space between frames to promote air circulation.

## Part Two: Products

### 2.01 MATERIALS

- A. Doors, frames and frame components shall be manufactured from commercial quality carbon steel conforming to ASTM designation A366; or hot-dipped galvanized steel having an A60 zinc-iron alloy coating conforming to ASTM designation A653. Galvanized steel shall be treated to insure proper paint adhesion. All steel component parts used in galvanized doors and/or frames shall meet the galvanized specification. Stainless steel shall be fabricated from type #304 or #316 stainless steel polished to a number 4 matte finish. All steel component parts used in stainless doors and/or frames shall also be stainless steel.
- B. All doors, frames and frame components shall be cleaned, phosphatized and finished as standard with one coat of baked-on rust inhibiting prime paint in accordance with ANSI A250.10.
- C. Finish painted doors and frames shall be cleaned, phosphatized and finished with a baked-on rust-inhibiting paint in accordance with ANSI A250.3. Color or colors shall be selected from a choice of ten colors as shown in Steelcraft Catalog 613. Custom colors shall be available upon request.

### 2.02 CONSTRUCTION OF DOORS

- A. L-Series Doors shall be full-flush or full-flush seamless construction, fabricated from commercial quality carbon steel or hot-dipped galvanized steel (see Section 2.01A), 20 (.8mm), 18 (1mm), 16 (1.3mm) or 14 gage (1.7mm) for 1-3/4" (45mm) doors. Doors shall be reinforced, stiffened, sound deadened and insulated with impregnated Kraft honeycomb core completely filling the inside of the doors and laminated to inside faces of both panels using contact adhesive applied to both panels and honeycomb core. Door shall have continuous vertical mechanical interlocking joints at lock and hinge edges with visible edge seams or with edge seam filled and ground smooth. The internal portion of the seam shall be sealed with epoxy. An intermittent fastening along the seam is not permitted. Doors shall have beveled (1/8" (3mm) in 2" (51mm)) hinge and lock edges. Top and bottom steel reinforcement channels shall be galvanized 14 gage (1.3mm) and projection welded to both panels. Hinge reinforcements shall be 7 gage (4.4mm) for 1-3/4" (45mm) doors. Lock reinforcements shall be 16 gage

(1.3mm) and closer reinforcements 14 gage (1.7mm)- box minimum 6" (152mm) and 20" (508mm) long. Hinge and lock reinforcements shall be projection welded to the edge of the door. Galvanized doors shall have galvanized hardware reinforcements. Adequate reinforcements shall be provided for other hardware as required. Glass trim for doors with cutouts shall be 24 gage (.6mm) steel conforming to (select 1) (ASTM designation A 366 commercial quality carbon steel) (ASTM designation A 924 hot dipped galvanized steel with a zinc coating of 0.06 ounces per square foot (183g per square meter) (A60)). The trim shall be installed into the door as a four sided welded assembly. The trim shall (select one) (fit into a formed area of the door face, shall not extend beyond the door face and shall interlock into the recessed area) (cap the cutout but shall not extend more than 1/16" (1.6mm) from the door face). The corners of the assembly shall be mitered, reinforced and welded. The trim shall be the same on both sides of the door. Exposed fasteners shall not be permitted. Label and non-label doors shall use the same trim. Doors indicating divided glass lites shall be made using a door with a cutout and trim for one piece of glass. The small lites shall be created by an extruded aluminum grille work mechanically fastened to the glass lite trim on both sides of the door. The grille work sections shall be beveled on the exposed side and shall have a flange on the unexposed side to which glazing tape can be applied. The grille work shall be installed into both sets of glass trim prior to installing into the door. One glass trim and muntin assembly shall be installed into the door prior to glazing. After glazing the other glass trim and muntin assembly shall be installed into the door. All exterior out swing doors shall have the tops closed to eliminate moisture penetration. Door tops shall not have holes or openings. Top caps are permitted. All exterior doors shall include a self-adjusting, concealed door sweep installed in the bottom channel. The bottom seal shall not include springs.

- B. LS-Series Stainless steel doors shall be 1-3/4" (45mm) thick fabricated from 18 gage (1mm) stainless steel (see Section 2.01). Doors shall be similar to flush door construction except top and bottom channels shall be flush mounted. Hinge reinforcements shall be 12 gage (3mm) stainless steel. Lock reinforcements shall be 18 gage (1mm) stainless steel.
- C. GRAIN-TECH stainable steel doors shall be 20 (.8mm), 18 (1mm) or 16 gage (1.3mm) galvanized steel. GRAIN-TECH doors are the same as flush door construction except GRAIN-TECH doors shall be fabricated from steel that has an embossed wood grain pattern extending the full height and width of the door. The wood grain embossment shall be minimum .005" deep. Applied grain pattern or material shall not be permitted. The wood grain face sheets shall be cleaned, phosphatized and prime painted with a stain absorbing primer. The door faces and edges shall be stained using conventional stains to achieve a (select 1) (ash, birch, mahogany, maple, oak, walnut) color. After staining, the door shall be clear coated. The clear coat shall contain UV inhibitors and be graffiti resistant. Custom wood tone finishes shall be available upon request. Doors shall be shipped to the job site adequately protected to prevent scratching and marring of the surfaces. Doors shall incorporate a polybag that will permit the hanging and operation of the door and provide protection until all finish work is completed.
- D. CE-Series decorative doors shall be manufactured the same as flush doors except: 6 panel doors shall be fabricated from 20 (.8mm), 18 (1mm) or 16 gage (1.3mm) galvanized steel (8 panel and crossbuck designs shall be fabricated from 20 (.8 mm) gage galvanized steel) and have the face sheets embossed. The bottom channel shall be designed to accept a concealed bottom seal. Doors shall be stiffened, sound deadened and insulated with a rigid polystyrene core bonded to the inside faces of both panels with contact adhesive. Voids around the perimeter of the door shall be filled with honeycomb.
- E. B-Series steel stiffened doors shall be the same as 1-3/4" (45 mm) L doors except for the core. The door shall be stiffened with steel stiffeners and sound deadened with fiberglass batts. The stiffeners shall be hat shaped sections fabricated from 20 gage (.8 mm) steel located 6" (152 mm) on center and shall be welded to the inside of the face sheets 4" (101.6 mm) on center. The hat shape stiffeners shall be welded together at the top and bottom. The areas between the stiffeners shall be filled with fiberglass.
- F. Temperature Rise T-Series doors shall be the same as 1-3/4" (45 mm) L doors except for the core. T-Series doors shall be full-flush or full-flush seamless construction, fabricated from cold-rolled steel or hot-dipped galvanized steel (see Section 2.01), 20 (.8mm), 18 (1mm), 16 (1.3mm) or 14 gage (1.7 mm). Mineral fiber core material shall be designed to produce the 250° F (121° C) temperature rise rating.
- G. Stile and rail doors shall be tubular stile and rail construction, 1-3/4" (45 mm)

thick and fabricated from 16 gage (1.3 mm) cold-rolled or galvanized steel (see Section 2.01). Hinge reinforcements shall be 7 gage (4.4 mm), lock reinforcements 16 gage (1.3 mm), and closer reinforcements 14 gage (1.7 mm). Galvanized doors shall have galvanized hardware reinforcements. Adequate reinforcements shall be provided for other hardware as required.

- 1 A- and AN-Series doors shall have stiles that extend the full height of the door. Rails shall be mechanically joined to the stiles forming a neat seam on the face.
- 2 S16-Series Doors shall have mitered corners, 12 gage (2.6 mm) reinforced and continuously welded and ground smooth. Flush type doors shall have 1-3/4" (45 mm) thick panels made of 2 pieces of 18 gage (1.1 mm) steel, reinforced with impregnated Kraft honeycomb core and locked to stiles and rails at assembly.

## 2.03 CONSTRUCTION OF FRAMES

- A. F-Series flush frames shall be formed from 18 (1mm), 16 (1.3mm), 14 gage (1.7mm) commercial quality carbon or galvanized, or 12 gage (2.6 mm) hot-rolled or galvanized steel (see Section 2.01). F-Series frames shall have 2" (51 mm) faces, FN-Series frames shall have 1" (25 mm) faces. F and FN18 (1.1 mm), 16 (1.3 mm), 14 (1.7 mm) gage frames shall be knocked down or set-up and welded. Miter corners shall have reinforcements with four concealed integral tabs for secure and easy interlocking of jambs to head. F12 frames shall be welded at the corners. 18 (1mm), 16 (1.3mm) and 14 gage (1.7mm) frames shall be supplied with factory installed rubber silencers, (3) per strike jamb and (2) per head for pairs of doors. Stick on silencers shall not be permitted. All 12 gage (2.6 mm) frames shall be supplied with loose pressure sensitive silencers for field application. Frames for 1-3/4" (45mm) doors shall have 7 gage (4.4mm) universal steel hinge reinforcements and prepared for 4-1/2" (114mm) x 4-1/2" (114mm) standard or heavy weight template hinges. Strike reinforcements shall be 16 gage (1.3mm) and prepared for an ANSI-A115.1-2 strike. Frames for 1-3/8" (35mm) doors shall have 10 gage (3.3mm) steel hinge reinforcements and preparations for 3-1/2" (89mm) x 3-1/2" (89mm) standard weight hinges. Strike jambs shall have a 14 gage (1.7mm) reinforcement and preparation for cylindrical ANSI-A115.3 strikes. Steel plaster guards shall be provided for all mortised cutouts. All hinge and strike reinforcements shall be projection welded to the door frame. Reinforcements for surface applied door closers shall be 14 gage (1.7mm) steel. Galvanized frames shall have galvanized hardware reinforcements. Adequate reinforcements shall be provided for other hardware when required. F-Series frames shall be furnished with a minimum of six wall anchors and two adjustable base anchors of manufacturer's standard design. FN-Series frames shall be furnished with a minimum of six wall anchors and two fixed base anchors. All exterior frames shall include a synthetic rubber pressure sensitive weatherstripping. Weatherstripping shall be mounted to the stop of the frame. Door and frame assembly shall have an air infiltration rate of .074 CFM/lineal foot of crack when tested in accordance with ASTM designation E283 and UL 1784. Metal plaster guards shall be provided for all mortised cutouts. All hinge and strike reinforcements shall be projection welded to the door frame. Reinforcements for surface closer shall be 14 gage (1.7mm) steel. Adequate reinforcements shall be provided for other hardware when required. Galvanized frames shall have galvanized hardware reinforcements.
- B. FS-Series Stainless steel frames shall be the same construction as specified in paragraph C-1 except frames shall be manufactured of 16 gage (1.3mm) stainless steel (see Section 2.01A). Hinge reinforcements shall be 12 gage (3mm) stainless steel. Strike reinforcements shall be 16 (1.3mm)-gage stainless steel. All hinge and strike reinforcements shall be projection welded to the door frame.
- C. MU-Series frames shall be the same construction as specified for F-Series frames except miter corners shall be reinforced with a corner clip to provide a firm interlocking of jamb to head. Mitered joints shall be secured with screws. MU frames have double return backbends.
- D. DW- and K-Series drywall frames shall be manufactured from 18 (1mm) or 16 (1.3mm) gage commercial quality carbon or galvanized steel. DW- and K-Series frames shall be formed with double return backbends to prevent cutting into drywall surface. Frames shall be knocked down, designed to be securely installed in the rough opening after wall board is applied. Mitered corners shall be reinforced with a wedge lock corner clip to provide a firm interlock of jambs to head. DW- and K-Series frames shall be supplied with factory installed rubber silencers, three (3) per strike jamb and two (2) per head for pairs of doors. Stick on silencers shall not be permitted. Frames for 1-3/4" (45mm) doors shall have 7 gage (4.4mm) steel hinge reinforcements and preparation for 4-1/2" (114mm)

x 4-1/2" (114mm) standard weight template hinges. Strike jamb shall have 16 gage (1.3mm) strike reinforcement and preparation for ANSI A115.1-2 strike. Frames for 1-3/8" (35mm) doors shall have 10 gage (3.3mm) steel reinforcements and preparation for 3-1/2" (89mm) x 3-1/2" (89mm) standard weight hinges. Strike jamb shall have 14 gage (1.7mm) reinforcement and preparation for ANSI A115.3 strike. Each jamb shall have an adjustable anchor located 4" (101.6mm) from the top of the door opening to hold frame in rigid alignment. DW-Series frames shall have a welded-in base anchor attaching plate in each jamb for field installation of loose base anchors. K-Series frames shall have two dimpled holes near the bottom of each jamb for anchoring base of frame with screws.

## 2.04 CONSTRUCTION OF ARCHITECTURAL STICK COMPONENTS

Architectural stick frame assemblies shall be made of standard frame components, manufactured from 16 gage (1.3mm) or 14 gage (1.7mm) commercial quality carbon or galvanized steel. Where sticks are used at door openings and frame assemblies, they shall be prepared for hardware as specified. Frame assemblies shall be fabricated from three basic components: Open sections (perimeter members), closed sections (intermediate members), and sill sections. Open sections shall be identical in configuration to Steelcraft standard frames. Closed sections shall have identical jamb depths, face dimensions and stops as open sections. Closed sections shall be factory assembled and shall have full length internal reinforcement of 16 gage (1.3mm) steel, factory spot-welded to both soffits at 8" (203 mm) on center. Sill sections shall be fabricated from galvanized steel and shall be either flush with both faces of adjacent vertical members or recessed from one face of the adjacent vertical members. Individual components shall be cut to length and notched to assure square joints and corners. All joints and corners of the frame assembly shall be welded and ground smooth at the face of the sections. Frame assemblies shall be shipped to jobsite completely welded. Field joints shall be permitted only when the size of the total assembly exceeds shipping limitations. When frame assemblies are subjected to windloads, vertical members shall be free of field splices. When specified, steel panels shall be furnished 3/8" (9.5mm) or 1-3/4" (45mm) thick as required. 3/8" (9.5mm) panels shall be made of 18 gage (1mm) cold-rolled steel faces with a corrugated fiberboard filler. 1-3/4" (45mm) panels shall be made of 20 gage (.8mm) cold-rolled steel faces with a honeycomb core. Cores shall be laminated to inside faces of both panels. Stick components and panels shall be furnished as specified in Section 2.01. Steel channel glazing beads shall be provided with assemblies for all areas in which glass or panels are to be installed and shall be pierced and dimpled for oval head sheet metal screws. All necessary anchors for jambs, heads and sills of assemblies shall be provided. When verification of field dimensions are necessary, they shall be made by the contractor. Frame fabrication shall not begin until these dimensions have been submitted.

## 2.05 PROTECTIVE COATINGS

The inside of all frames shall be fully grouted or, when an anti-freeze agent is used, shall be coated with a fibered asphalt coating prior to grouting. Coating shall be field applied by the contractor to a minimum 1/16" (1.6mm) thickness.

## 2.07 FINISH

- A. All doors, frames and frame components shall be cleaned, phosphatized and finished as standard with one coat of baked-on rust inhibiting prime paint in accordance with the ANSI A250.10 *Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames*.
- B. Factory finish painted doors and frames shall be cleaned, phosphatized and finished with baked-on rust inhibiting paint capable of passing a 200-hour salt spray and 480-hour humidity test in accordance with ASTM designation B117 and ASTM designation D1735. Finish paint shall be in accordance with ANSI/SDI A250.3, *Test Procedure and Acceptance Criteria for Factory Applied Finish Painted Steel Surfaces for Steel Doors and Frames*.

# Part Three: Execution

## 3.01 INSTALLATION

- A. Doors and frames shall be installed in accordance with ANSI/DHI A115.1G Installation Guide for Doors and Frames and/or Steelcraft installation instructions.
- B. Label doors and frames shall be installed per NFPA-80 and/or as noted in item number 3.01A.



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