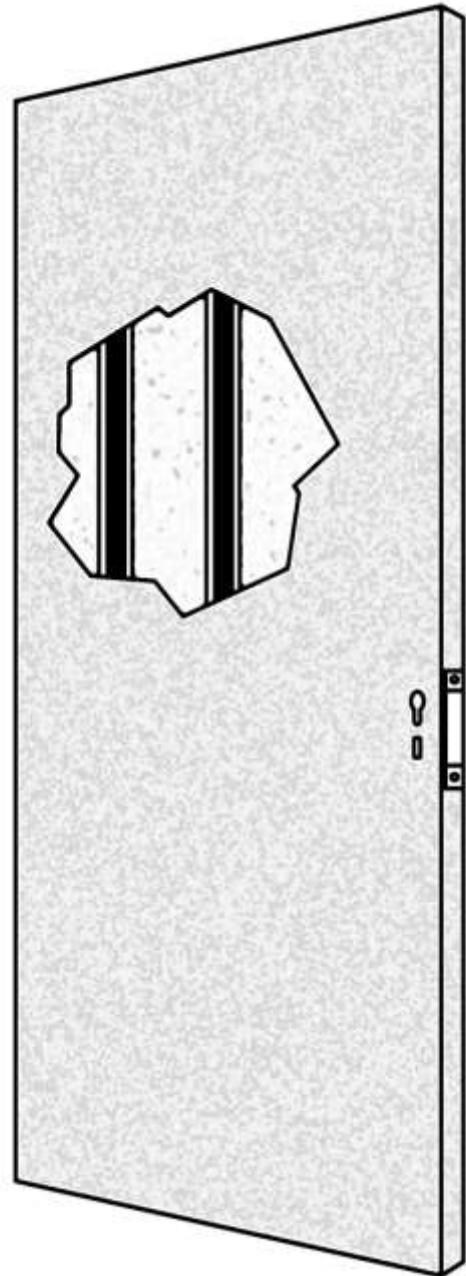


**ENGINEERING DETAILS for STANDARD  
SERIES C 12 and C 14 Seamless Steel stiffened 1 3/4" Doors.**

**Specifications**

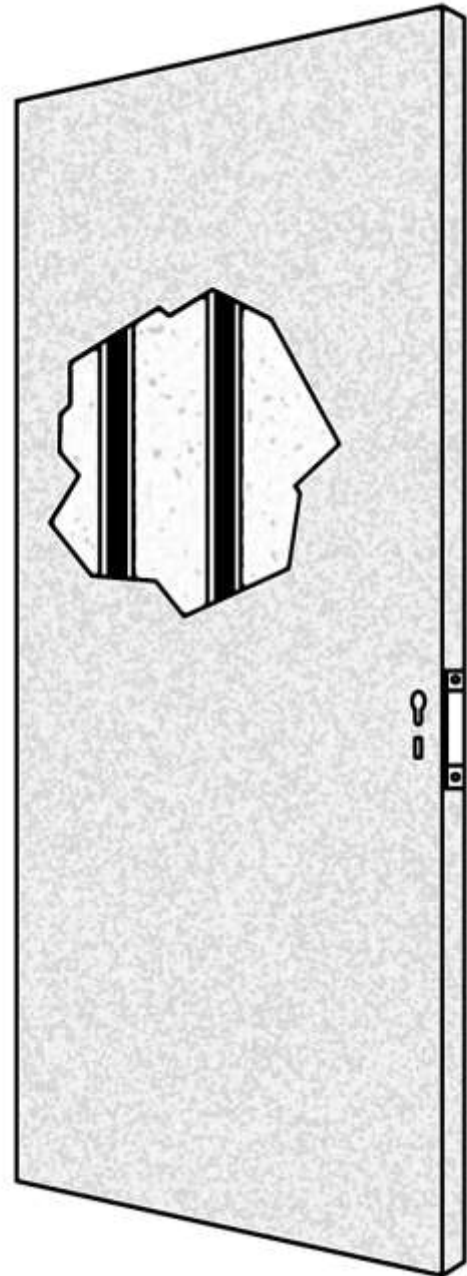
1. Doors shall be formed of two 12 or 14 gage steel sheets per ASTM A1008, 568 & 569 or A60 Galv. steel sheet per ASTM A 924 and A653 and shall be 1 3/4" thick.
2. Doors shall be internally reinforced with pairs of hat-shaped steel stiffeners joined together and running vertically full height of door, not more than 6" apart. Stiffeners shall be spot welded 4" o.c. to both faces of doors, and arc-welded to each other top and bottom.
3. Voids between stiffeners shall be filled with Fiberglass or mineral wool insulation.
4. There shall be no seams on the faces or edges of doors. Vertical edges of doors shall be continuously seam-welded full height of the door.
5. Exterior doors shall be capped to retard moisture penetrating the door.
6. All hinge reinforcements shall be 3/16" thick. Top hinge reinforcements shall be provided with a back-up reinforcement.
7. All doors shall be internally reinforced with a 13 gage plate both sides of the door for application of surface applied door closers and holders.
8. Glass light moulding shall be Pioneer standard steel moulding, with no exposed screws on the secure side of door.
9. Louvers shall be Pioneer standard design for application required.
10. Fire rated doors, where indicated, shall be manufactured in accordance with the UL or WHI procedures and bear the appropriate classification mark.
11. All doors shall be cleaned and given one coat of baked-on, rust-inhibitive metal primer in compliance with ANSI A 250.10-2004
12. Door construction complies with ANSI A250.8-2003 (SDI)
13. Doors shall be packaged to minimize damage in transit and handling.
14. Hardware reinforcements are in accordance with ANSI A 250.6-2003. Locations are in accordance with ANSI/BHMA A156.115



**ENGINEERING DETAILS for STANDARD  
SERIES C 16 and C 18 Seamless Steel stiffened 1 3/4" Doors.**

**Specifications**

1. Doors shall be formed of two 16 or 18 gage steel sheets per ASTM A1008, 568 & 569 or A60 Galv. steel sheet per ASTM A 924 and A653 and shall be 1 3/4" thick.
2. Doors shall be internally reinforced with pairs of hat-shaped steel stiffeners joined together and running vertically full height of door, not more than 6" apart. Stiffeners shall be spot welded 4" o.c. to both faces of doors, and arc-welded to each other top and bottom.
3. Voids between stiffeners shall be filled with Fiberglass or mineral wool insulation.
4. There shall be no seams on the faces or edges of doors. Vertical edges of doors shall be continuously seam-welded full height of the door.
5. Exterior doors shall be capped to retard moisture penetrating the door.
6. All hinge reinforcements shall be 3/16" thick. Top hinge reinforcements shall be provided with a back-up reinforcement.
7. All doors shall be internally reinforced with a 13 gage plate both sides of the door for application of surface applied door closers and holders.
8. Glass light moulding shall be Pioneer standard steel moulding, with no exposed screws on the secure side of door.
9. Louvers shall be Pioneer standard design for application required.
10. Fire rated doors, where indicated, shall be manufactured in accordance with the UL or WHI procedures and bear the appropriate classification mark.
11. All doors shall be cleaned and given one coat of baked-on, rust-inhibitive metal primer in compliance with ANSI A 250.10-2004
12. Door construction complies with ANSI A250.8-2003 (SDI)
13. Doors shall be packaged to minimize damage in transit and handling.
14. Hardware reinforcements are in accordance with ANSI A 250.6-2003. Locations are in accordance with

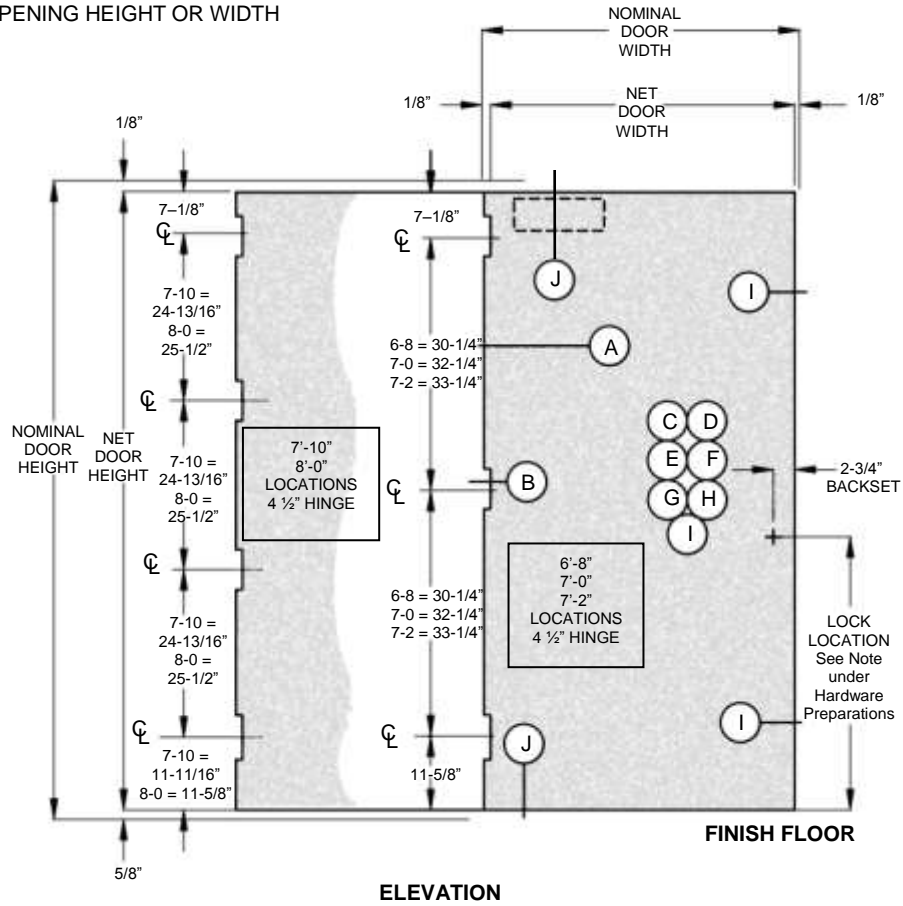


**TECHNICAL DATA – DOORS**

**C SERIES**

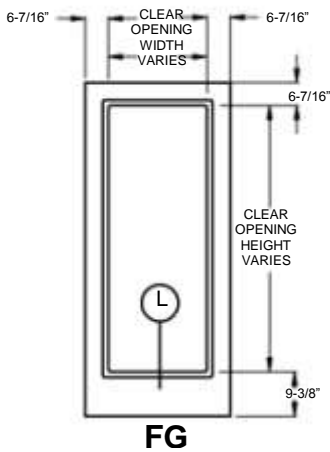
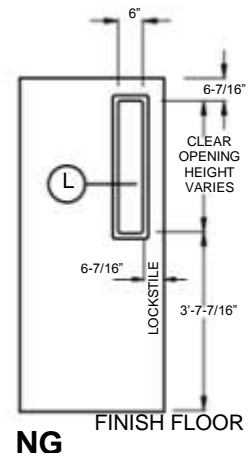
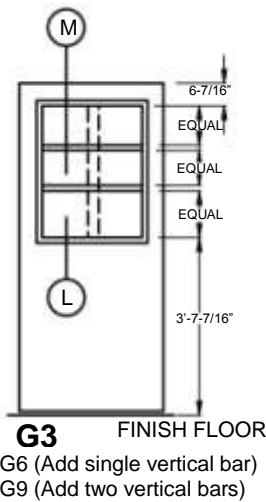
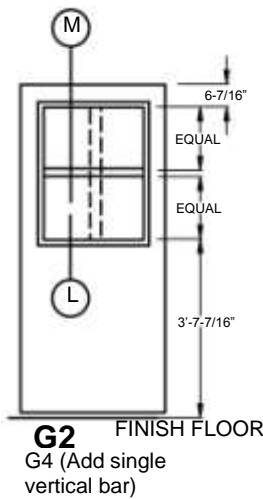
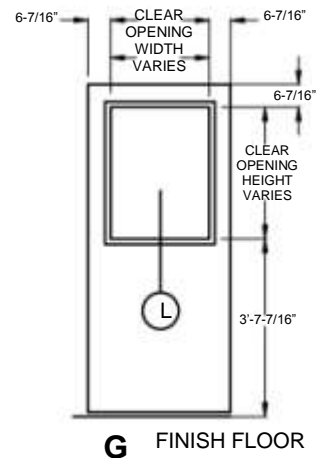
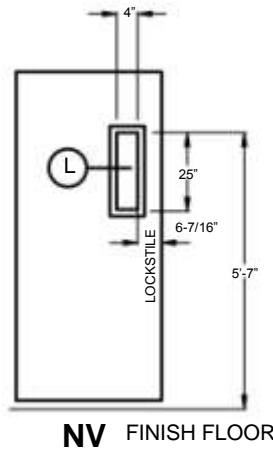
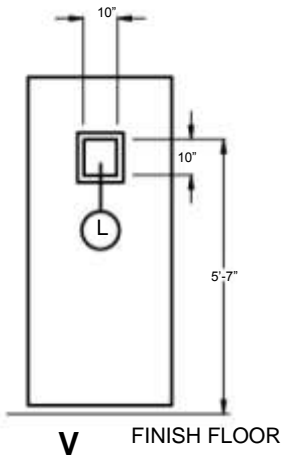
**Standard SERIES C Seamless 1 3/4" Doors**

NOTE: NOMINAL DIMENSIONS =  
FRAME OPENING HEIGHT OR WIDTH

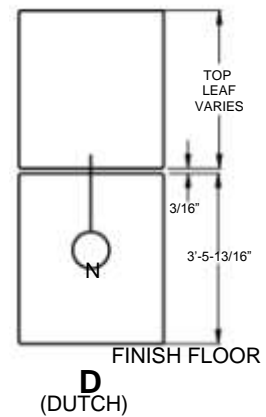
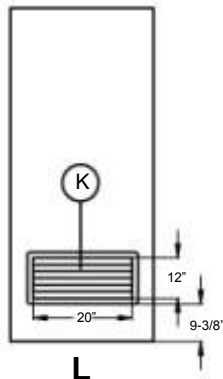


**TECHNICAL DATA – DOORS**

**C SERIES**



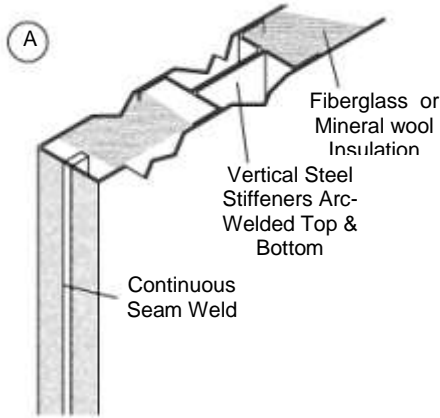
NOTE: 12" x 12" Louver standard for 2' -0" & 2'-4" door – all others 20" x 12", 20" x 24" Louver available



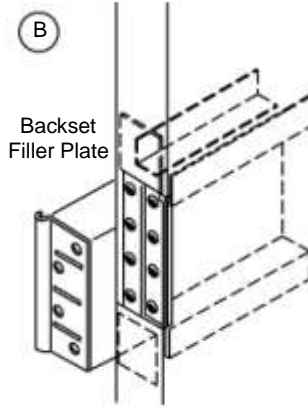
**TECHNICAL DATA – DOORS**

**C SERIES**

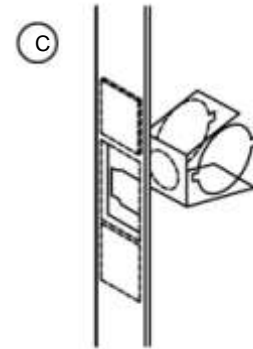
**MANUFACTURING DETAILS: STEEL STIFFENED DOORS**



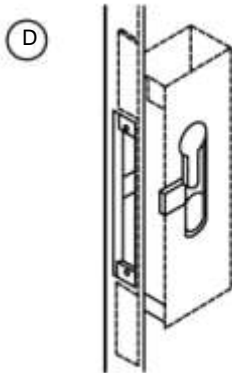
SEAM WELD EDGE & INTERNAL CONSTRUCTION



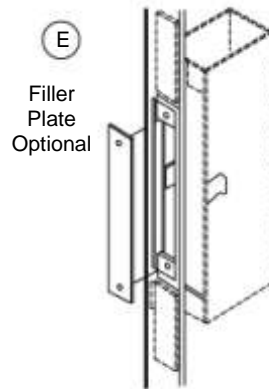
STANDARD HINGE REINFORCEMENT



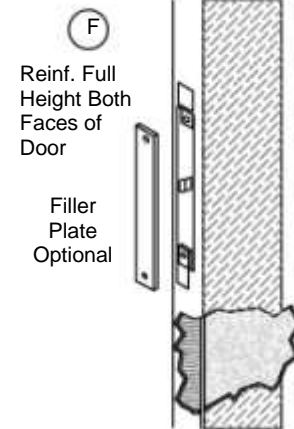
GOV'T 161 CYLINDRICAL(CYL) LOCK PREPARATION



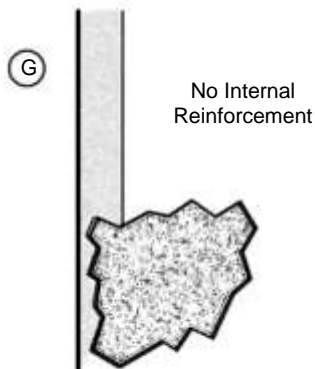
GOV'T 86/MORTISE (M) LOCK PREPARATION



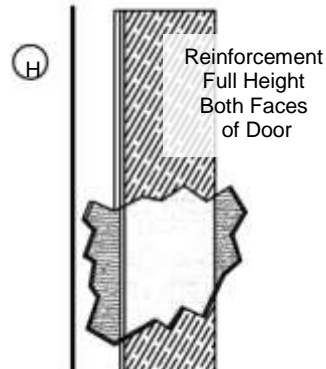
MULTI-PURPOSE (MP) PREPARATION



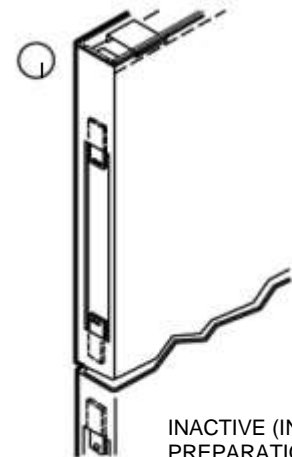
REINFORCED MULTI-PURPOSE (RMP) PREPARATION



BLANK ACTIVE (BA) PREPARATION



REINFORCED (RBA) BLANK ACTIVE PREPARATION

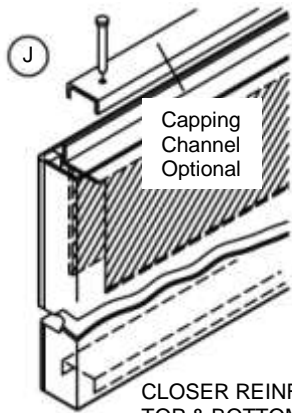


INACTIVE (INA) PREPARATION

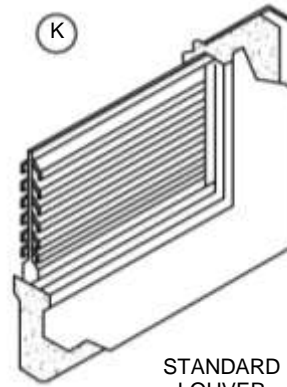


**TECHNICAL DATA – DOORS**

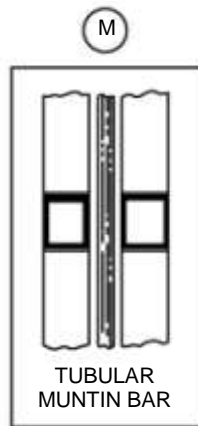
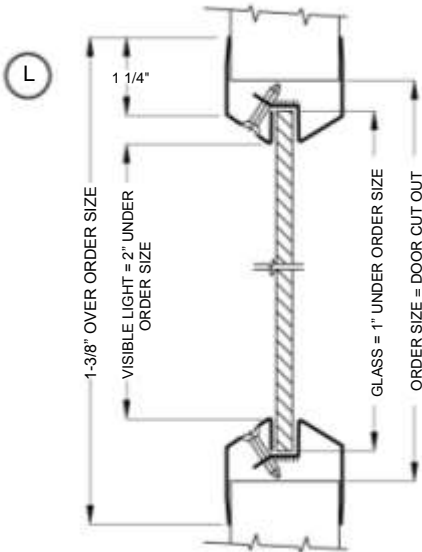
**C SERIES**



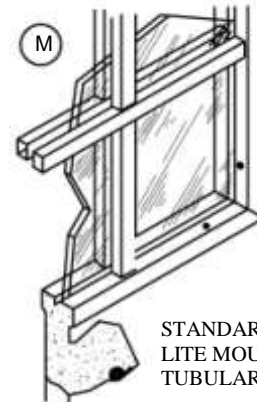
CLOSER REINFORCEMENT  
TOP & BOTTOM CHANNELS



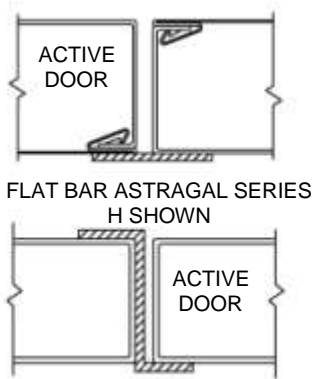
STANDARD  
LOUVER



TUBULAR  
MUNTIN BAR

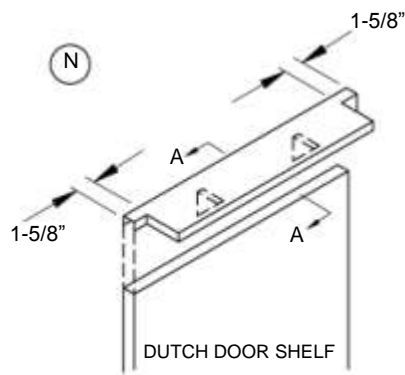


STANDARD STEEL GLASS  
LITE MOULDING WITH  
TUBULAR MUNTIN BAR

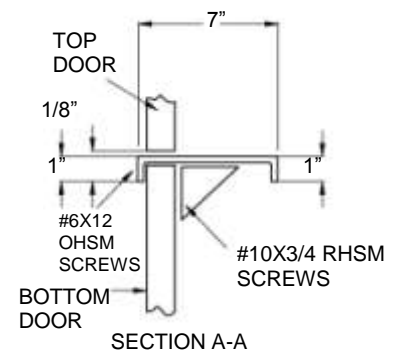


FLAT BAR ASTRAGAL SERIES  
H SHOWN

Z ASTRAGAL SERIES CH  
SHOWN



DUTCH DOOR SHELF



SECTION A-A

# TECHNICAL DATA – DOORS

# C SERIES

## STANDARD HARDWARE PREPARATIONS

**HINGES:** Doors to be mortised and reinforced for application of 4½" x 4½" full mortised template butt hinges; 1½" pair @ 6'8", 7'0" and 7'2" doors: 2 pair @ 7'10" and 8'0" doors. All hinge reinforcements are 3/16" thick; with the top hinge further reinforced with high frequency back-up reinforcement.

**LOCKS:**

Active Doors to be prepared as follows:

1. Gov't 161 Cylindrical (CYL) Lock/Latch, with 2-¾" backset.
2. Universal Gov't 86 Mortise (M) Lock/Latch (to be used with full escutcheon trim), with 2-¾" backset.
3. Multi-purpose (MP) preparation consisting of a Gov't 86 edge preparation, with lock reinforcement installed. No cutouts on the faces of the door.
4. Reinforced Multi-purpose (RMP) preparation consisting of Gov't 86 edge preparation, with lock reinforcement installed. The lock stile to be reinforced full height of the door on both side. The hinge stile is reinforced on both faces at panic device height. No cutouts on the faces of the door.
5. Blank Active (BA) preparation provides a totally blank lock stile — no lock preparation and no internal reinforcements. No cutouts on edges or faces of door.
6. Reinforced Blank Active (RBA) preparation provides a totally blank lock stile — no lock preparation. The lock stile to be reinforced full height of the door on both sides. The hinge stile is reinforced on both faces at panic device height. No cutouts on the faces of the door.

**Inactive Doors to be prepared as follows:**

1. Inactive (INA) preparation consisting of two ANSI/BHMA A156.115 flush bolts – 12" top and bottom rod dimension on doors up to and including 7'-2", 12" bottom and 18" top on doors over 7'-2" and up to and including 7'-6". A 12" top rod dimension is optionally available on 7'-10" and 8'-0" doors. Inactive door is provided with an ASA 4-7/8" strike preparation (no lip cutout – to maintain reversibility of door). Net door width is 1/8" greater than active door.
2. Blank Inactive (BI) preparation provides a totally blank lock stile — no lock preparation and no internal reinforcements. No cutouts on edges of faces of the door. Net door width is 1/8" greater than active door.
3. Reinforced Blank Inactive (RBI) preparation provides a totally blank lock stile — no lock preparation. The lock stile to be reinforced full height of the door on both side. The hinge stile is reinforced on both faces at panic height. No cutouts on faces of the door. Net door width is 1/8" greater than active door.

**LOCK LOCATION:** All Locks located to conform to standard 38" C of strike on frame.

**CLOSERS AND HOLDERS:** All Series C Doors are reinforced internally both sides of the door for application of most types of surface applied closers and holders. A 13 Ga. reinforcement plate 4 ½" high measured from top of door and 16" long measured from a point 1-7/8" from the door jamb will accommodate most of the door closers currently manufactured and used on hinge side installations.

## NOTES

In order to provide our customers with the finest products, manufactured in the most up to date manner, Pioneer Industries reserves the right to make design or specific construction changes without notice.

Series C Doors are individually cartoned in corrugated cardboard and banded with straps. Muntin Bars for multiple glass lights are factory installed.

Series C Doors are baked prime finish. Factory prefinished Series C Doors are optionally available. Paint primer not compatible with urethane or epoxy topcoats.

Vertical steel stiffeners are fastened to both face sheets by spot welds (resistance welding) spaced at 4" on center. Due to molecular changes in steel at the spot-weld locations, marking may be visible even after a high quality finish process. Also, although marking may not

be visible on the prime coated door skin, some weld marks or "shrink marks" may become noticeable when a high gloss finish is applied.

Use of a flat finish coat may produce a more desirable appearance.

Series C Doors are reversible, within the limits of the type and application of the required hardware. Handed or handed and beveled doors,

for any application, are optionally available.

Pairs of doors are furnished as two individual doors.

Fire Rated Doors — See Fire Rated Section for critical dimensions.

# TECHNICAL DATA – DOORS

# C SERIES

\* CONSULT FACTORY FOR OTHER SIZES

STANDARD SIZES*		
DOOR OPENING HEIGHT	DOOR OPENING WIDTH	
	SINGLE	PAIR
	2'-0"	
	2'-4"	4'-8"
	2'-6"	5'-0"
6'-8"	2'-8"	5'-4"
7'-0"	2'-10"	5'-8"
7'-2"	3'-0"	6'-0"
7'-10"	3'-4"	6'-8"
8'-0"	3'-6"	7'-0"
	3'-8"	7'-4"
	3'-10"	7'-8"
	4'-0"	8'-0"