DOOR SERIES
DOOR SERIES CONTENT

Honeycomb (HC Series) ........................................................................................................ D-4
Polystyrene (PS Series) ...................................................................................................... D-6
Polyurethane (PU Series) ................................................................................................... D-8
Steel-Stiffened (ST Series)
  with polystyrene (STPS) .................................................................................................. D-10.1
  with wool (STW) ......................................................................................................... D-10.2
  with polyurethane (STPU) .......................................................................................... D-10.3
  with wool/thermal (STWT) .......................................................................................... D-10.4
Temperature Rise (TR series)
  mineral core 450°F in 30mn (TR25030) ........................................................................ D-12.1
  steel stiffened 450°F in 30mn (ST45030) ..................................................................... D-12.2
  mineral core 250°F in 30mn (TR25030) ........................................................................ D-12.3
Lead-Lined (LL Series)
  1/16” (116LL) ............................................................................................................... D-14.1
  1/8” (18LL) .................................................................................................................. D-14.2
Honeycomb core
Continuous bonding of core to steel faces.

Inoperable panel STC 38, with appropriate sound gasketings operational door calculated STC of 36. Added stiffener, full height, in middle of door when over 3'0" wide.
Polystyrene core
"R" factor: 7.03(hr°F*sq.ft)/BTU - "U" factor(1/R): 0.14 BTU/(hr°F*sq.ft) per ASTM C518
"R" factor: 2.44(hr°F*sq.ft)/BTU - "U" factor(1/R): 0.41 BTU/(hr°F*sq.ft) per ASTM C1363
"R" factor: 2.63(hr°F*sq.ft)/BTU - "U" factor(1/R): 0.38 BTU/(hr°F*sq.ft) per NFRC 102
Continuous bonding of core to steel faces.

Added stiffener, full height, in middle of door when over 3'0" wide.
**Urethane core**

"R" factor: 10.20(hr°F*sq.ft)/BTU - "U" factor (1/R): 1.80 BTU/(hr°F*sq.ft) per ASTM C518

"R" factor: 2.63(hr°F*sq.ft)/BTU - "U" factor (1/R): 0.38 BTU/(hr°F*sq.ft) per ASTM C1363

"R" factor: 2.80(hr°F*sq.ft)/BTU - "U" factor (1/R): 0.36 BTU/(hr°F*sq.ft) per NFRC 102

Continuous bonding of core to steel faces.

Added stiffener, full height, in middle of door when over 3'0" wide.
Steel stiffened with polystyrene

"R" factor: 1.54(hr*°F*sq.ft)/BTU - "U" factor (1/R): 0.65 BTU/(hr*°F*sq.ft) per ASTM C1363
"R" factor: 1.70(hr*°F*sq.ft)/BTU - "U" factor (1/R): 0.58 BTU/(hr*°F*sq.ft) per NFRC 102

With vertical 18 gage steel stiffeners, 6" on center with solid polystyrene blocks.
Continuous bonding of core to steel faces.
Steel stiffened with wool

"R" factor: 1.80(hr°F*sq.ft)/BTU - "U" factor (1/R): 0.55 BTU/(hr°F*sq.ft) per ASTM C1363

With vertical 18 gage steel stiffeners, 6" on center.
Continuous bonding of core to steel faces.
Steel stiffened with urethane

"R" factor: 1.70(hr*°F*sq.ft)/BTU -*"U"* factor (1/R): 0.58 BTU/(hr*°F*sq.ft) per ASTM C1363
"R" factor: 1.80(hr*°F*sq.ft)/BTU -*"U"* factor (1/R): 0.55 BTU/(hr*°F*sq.ft) per NFRC 102

With vertical 18 gage steel stiffeners, 6" on center with solid urethane blocks.
Continuous bonding of core to steel faces.

*R and U values are calculated based on results with STPS core
Steel stiffened with wool, Thermal rated
"R" factor: 1.80(hr*°F*sq.ft)/BTU - "U" factor(1/R): 0.55 BTU/(hr*°F*sq.ft) per ASTM C1363
With vertical 18 gage steel stiffeners, 6" on center.
Continuous bonding of core to steel faces.

- high density batt-type insulation
- intumescent between stiffeners
- 6"
Temperature rise - Mineral core - 450°F in 30mn
Continuous bonding of core to steel faces.
Temperature rise - Steel stiffened - 450°F in 30mn
With vertical 18 gage steel stiffeners, 6" on center.
Continuous bonding of core to steel faces.

high density batt-type insulation
**Temperature rise - Mineral core - 250°F in 30mn**
Continuous bonding of core to steel faces.
**Lead-lined**
Continuous bonding of core to steel faces.

Complies with ASTM B29, QQ-L-201 "C" Category and CSA HP2 type 2 lead.
No fire rating available.
**Lead-lined**
Continuous bonding of core to steel faces.

Complies with ASTM B29, QQ-L-201 "C" Category and CSA HP2 type 2 lead.
No fire rating available
FRAME SERIES
FRAME SERIES CONTENT

Standard Frame (SR Series)
SR18 ............................................................. F-4
SR16 ............................................................. F-6
SR14 ............................................................. F-8
SR12 ............................................................. F-10

Drywall Frame (DW Series)
DW18 ............................................................. F-12
DW16 ............................................................. F-14
DW14 ............................................................. F-16

Pre-Drywall Frame (DR Series)
DR18 ............................................................. F-18
DR16 ............................................................. F-20
DR14 ............................................................. F-22

Less Return Frame (LR Series)
LR18 ............................................................. F-24
LR16 ............................................................. F-26
LR14 ............................................................. F-28

Split Frame (SF Series)
SF16 ............................................................. F-30

Double Egress Frame (DE Series)
DE16 ............................................................. F-32
DE14 ............................................................. F-34
Double rabbet profile, SR18

All jamb depths (excluding 5 3/4”)

5 3/4” jamb depth

Single rabbet at less than 3 5/8” jamb depth
Double rabbet profile, SR16

All jamb depths (excluding 5 3/4”)

5 3/4” jamb depth

Single rabbet at less than 3 5/8” jamb depth
Double rabbet profile, SR14

All jamb depths (excluding 5 3/4")

5 3/4" jamb depth

Single rabbet at less than 3 5/8" jamb depth
Double rabbet profile, SR12

All jamb depths (excluding 5 3/4"

5 3/4" jamb depth

Single rabbet at less than 3 5/8" jamb depth
Double rabbet profile, DW18

All jamb depths

Single rabbet at less than 3 5/8" jamb depth
Double rabbet profile, DW16

All jamb depths

Single rabbet at less than 3 5/8" jamb depth
Double rabbet profile, DW14

All jamb depths

Single rabbet at less than 3 5/8" jamb depth
Double rabbet profile, DR18

All jamb depths

Single rabbet at less than 3 5/8" jamb depth
Double rabbet profile, DR16

All jamb depths

Single rabbet at less than 3 5/8" jamb depth
Double rabbet profile, DR14

All jamb depths

Single rabbet at less than 3 5/8" jamb depth
Double rabbet profile, LR18

All jamb depths

Jamb depth is a 1/8” more than wall thickness

Single rabbet at less than 3 5/8” jamb depth
Double rabbet profile, LR16

All jamb depths

Jamb depth is a 1/8” more than wall thickness

Single rabbet at less than 3 5/8” jamb depth
Double rabbet profile, LR14

All jamb depths

Jamb depth is 1/8” more than wall thickness

Single rabbet at less than 3 5/8” jamb depth
Double rabbet profile, SF16

- Drywall anchor (bottom of jambs only)
- Bottom anchor
- Wall anchor
- #8 x 3/8” square pan head untighten to butt wall anchor to the wall
- 3/4” tek screw
- Sandpaper strip
- Trim
- From 1 1/2” to 4”
- 4 1/2” minimum
- 1 1/2” minimum
- 2 1/4” maximum
- Spreader bar
- Bottom anchors

Rough opening: opening width + 2"
   : opening height + 1"

**Double egress frame, DE16**
Actual opening is 1/8" less than nominal size to accept standard width doors.

**-DE1**
- Jamb: a=2"
- Head: c=2"
- b=3 1/4"
- d=2 5/8"

**-DE2 (by default unless otherwise noted)**
- Jamb: a=1 3/8"
- Head: c=1 3/8"
- b=2 5/8"
- d=2"

**Limitations**
- Nominal Width up to 7'0"
- Nominal Height up to 7'6"
- Jamb depth up to 5 3/4"

Single return shown, double return and less return also available
Double egress frame, DE14
Actual opening is 1/8" less than nominal size to accept standard width doors.

-DE1
Jamb: a=2"  Head: c=2"  
b=3 1/4"  d=2 5/8"

-DE2 (by default unless otherwise noted)
Jamb: a=1 3/8"  Head: c=1 3/8"
    b=2 5/8"  d=2"

Single return shown, double return and less return also available
CUSTOM FRAME
ELEVATION
CUSTOM FRAME ELEVATION CONTENT

Double Rabbet Profile (D)
  Standard Series (SR).............................................................................................C-5
  Drywall/Pre-drywall Series (DR/DW).................................................................C-7
Less Return Frame Profile (LR)
  Less Return Frame Series (LR).............................................................................C-9
Single Rabbet Profile (S)
  Standard Series (SR)..........................................................................................C-11
  Drywall/Pre-drywall Series (DR/DW)................................................................C-13
Split Frame Profile (SF)
  Split Frame Series (SF)......................................................................................C-15
  Glazing Bead...........................................................................................................C-17
Double rabbet profile, D
Standard Series (SR)

Jamb/Head/Base

2-way corner 90°

Mullion

3-way corner

2-way corner 45°

Jamb depth

Throat

Varies

$\frac{5}{8}$

$\frac{5}{8}$

$\frac{5}{8}$

$\frac{5}{8}$

$\frac{5}{8}$

Glazing bead side per handing
Double rabbet profile, D
Drywall/Pre-drywall Series (DW/DR)

Jamb/Head/Base

2-way corner 90°

mullion

2-way corner 45°

3-way corner

SR series at base
glazing bead side per handing
Double rabbet profile, D
Less Return Series (LR)

Jamb/Head/Base

2-way corner 90°

Mullion

2-way corner 45°

3-way corner

Glazing bead side per handing
**Single rabbet profile, S**
**Standard Series (SR)**

*Jamb/Head/Base*
- Jamb depth: 4" (varies)
- Throat: 1 1/8" (varies)

*2-way corner 45°*
- Jamb depth: 5/8" (varies)
- 1" (varies)

*2-way corner 90°*
- Jamb depth: 5/8" (varies)

Glazing bead side per handing:
- S1 model: 2" face door side
- S2 model: 1 3/8" face on door side
Single rabbet profile, S
Drywall/Pre-drywall Series (DW/DR)

Jamb/Head/Base

mullion

2-way corner 45°

2-way corner 90°

SR series at base
glazing bead side per handing

*S1 model : 2" face door side
*S2 model : 1 3/8" face on door side
Split frame profile, SF
Split Frame Series (SF)

Jamb/Head

Mullion

Base

Glazing bead always on door side

Rough opening at borrowed lite: overall width - 2"
  : overall height - 2"

Rough opening at sidelite and transom: overall width - 2"
  : overall height - 1"
**Glazing bead**

Default glazing bead

![Default glazing bead diagram]

- drill and countersunk for #6 screws

Default glazing bead at centered glass (CG) profile

![Default glazing bead at centered glass (CG) profile diagram]

- drill and countersunk for #6 screws
OPTIONS
## OPTIONS

### Door Hardware Options

#### Mortise Hinge
- **45S** - 4 ½” standard weight hinge reinforcement ............................................. O-4.1
- **45H** - 4 ½” heavy weight hinge reinforcement ................................................. O-4.2
- **45C** - 4 ½” convertible hinge reinforcement .................................................. O-4.3
- **45R** - 4 ½” reversible hinge reinforcement .................................................... O-4.4
- **45RC** - 4 ½” reversible convertible hinge reinforcement ................................. O-4.5
- **50S** - 5” standard weight hinge reinforcement ................................................. O-4.6
- **50H** - 5” heavy weight hinge reinforcement .................................................... O-4.7
- **35S** - 3 ½” standard weight hinge reinforcement ............................................. O-4.8
- **40S** - 4” standard weight hinge reinforcement ................................................ O-4.9
- **45I** - 4 ½” institutional hinge reinforcement ................................................... O-4.10
- **60S** - 6” standard weight hinge reinforcement ................................................ O-4.11
- **60H** - 6” heavy weight hinge reinforcement .................................................... O-4.12
- **AH** - prep. for anchor hinge ........................................................................ O-4.13
- **DBLM** - double mortising of hinge reinforcement........................................... O-4.14

#### Electrified Hardware Prep
- **EH** - prep. for electric hinge ........................................................................ O-4.15
- **EPT** - prep. for electric power transfer ........................................................... O-4.16
- **RACE** - raceway for electrified hardware ....................................................... O-4.17
- **BOXED** - box for electric device .................................................................. O-4.18

#### Continuous Hinge
- **CCH** - concealed leaf continuous hinge reinforcement ................................... O-4.19
- **CCEH** - concealed leaf continuous electric hinge reinforcement .................... O-4.20
- **SCH** - surface continuous hinge reinforcement ................................................ O-4.21

#### Invisible Hinge
- **INVH** - invisible hinge reinforcement ............................................................ O-4.22

#### Pivot
- **TPIV** - prep. for top pivot ............................................................................... O-4.23
- **IPIV** - intermediate pivot prep. ....................................................................... O-4.24
- **BPIV** - prep. for bottom pivot ........................................................................ O-4.25

#### Pocket Pivot
- **PPIV** - prep. for pocket pivot .......................................................................... O-4.26

#### Lock
- **161** - cylindrical lock reinforcement ................................................................ O-4.27
- **161TB** - cylindrical lock reinforcement with thru bolts ............................... O-4.28
- **IL4** - Interconnected lock 4” C/C (161TB+CYLDL) ......................................... O-4.29
- **IL512** - Interconnected lock 5 1/2” C/C (161TB+CYLDL) ................................ O-4.30
- **86ED** - mortise lock reinforcement ................................................................ O-4.31
- **86FH** - mortise lock reinforcement with function hole .................................. O-4.32
- **DGL161** - digital lock prep. ............................................................................ O-4.33
- **DGL86** - mortise lock for coded access, electronic or digital lock............... O-4.34
OPTIONS

PAL- pre-assembled lock reinforcement .......................................................... O-5.1
Deadlock
CYLDL- cylindrical deadlock reinforcement .................................................. O-5.2
MODDL- mortise deadlock reinforcement ..................................................... O-5.3
MODDLFH- mortise deadlock reinforcement with function hole ............... O-5.4
Exit Device
RIM- Rim exit device reinforcement ........................................................... O-5.5
RIMFH- Rim exit device reinforcement with function holes ..................... O-5.6
SVR- Surface vertical rod exit device reinforcement ................................ O-5.7
SVRHFH- Surface vertical rod exit device reinforcement with function holes O-5.8
MED- Mortise exit device reinforcements .................................................. O-5.9
MEDFH- Mortise exit device reinforcements with function holes .......... O-5.10
CVR- Concealed vertical rod exit device reinforcements ....................... O-5.11
INCVR- Impact concealed vertical rod exit device reinforcements ........... O-5.12
INMED- Impact mortise exit device reinforcements ............................... O-5.13
Exit Device Options
ED12- Exit device surface reinforcement in 12ga ..................................... O-5.14
ED14- Exit device surface reinforcement in 14ga ..................................... O-5.15
AUXFL- Auxiliary fire latch ..................................................................... O-5.16
LBR- Less bottom rod (no prep) ............................................................... O-5.17
Strikes
ASA- Standard ANSI 4 7/8” strike reinforcement ..................................... O-5.18
ASA12- Standard ANSI 4 7/8” strike reinforcement in 12ga ................. O-5.19
T- Standard 2 ¾” “T” strike reinforcement ............................................... O-5.20
DL234- Cylindrical deadlock strike reinforcement ............................... O-5.21
DL312M- 3 ½” mortise deadlock strike reinforcement ........................... O-5.22
DL478- ANSI standard 4 7/8” deadlock strike reinforcement ............... O-5.23
ES- Prep. for electric strike ..................................................................... O-5.24
OBS- Prep. for open back strike .............................................................. O-5.25
RIMS- Rim strike reinforcement ............................................................ O-5.26
Bolt (ea)
FB- ANSI A156-16 flush bolts ................................................................. O-5.27
SB- Surface bolt reinforcements ............................................................... O-5.28
FBPNLTB- ANSI A156-16 flush bolt strike in panel .............................. O-5.29
Closers (ea)
CL16- Standard closer reinforcement in 16ga ........................................ O-5.30
CL14- Standard closer reinforcement in 14ga ........................................ O-5.31
CL12- Standard closer reinforcement in 12ga ........................................ O-5.32
CID- Concealed in door closer prep. ......................................................... O-5.33
COHS- Prep. for concealed overhead stop ............................................. O-5.34
FWCR- Full width closer reinforcement .................................................. O-5.35
OPTIONS

Non Mechanical Trim (ea)
- PP- Push and pull reinforcements ................................................................. O-6.1
- PGB- Pull with grab bar reinforcements.......................................................... O-6.2
- FP- Flush pull with capping (push, pull or both sides) .................................. O-6.3

Other Hardware Preparation
- SHL- Shearlock reinforcement .................................................................... O-6.4
- RL- Roller / Catch prep.................................................................................. O.6-5
- MC- Prep. for magnetic contact with reinforcement ...................................... O.6-6
- ADB- Prep. mortised automatic door bottom................................................. O.6-7
OPTIONS

Engineered Door Options
Astragal & Option
FAS- Flat bar astragal ............................................................... O-7.1
ZAS- “Z” astragal ................................................................ O-7.2
DAS- Deviated astragal for single leaf .................................... O-7.3
LLAS- 1/16” lead lined flat bar astragal ................................. O-7.4
SAS- Extra for screwed astragal to the door ......................... O-7.5
WAS- Extra for Welded astragal to the door ....................... O-7.6

Shelf
FDD- Full dutch door shelf .................................................... O-7.7
HDD- Half dutch door shelf .................................................. O-7.8

Model
1PNL- One panel ................................................................. O-7.9
2PNAE- Two panels soft arch door with embossing .......... O-7.10
2PNL- Two panels ............................................................. O-7.11
2PNLA- Two panels soft arch ................................................. O-7.12
4PNL- Four panels ............................................................ O-7.13
6PNL- Six panels ............................................................... O-7.14
FL2PNL- Flush with 2 panels at bottom ............................ O-7.15
N6PNL- Narrow six panels ............................................... O-7.16
DD- Dutch door (shelf not included) ................................. O-7.17
CED- Custom embossed door ............................................. O-7.18
RPD- Recessed panel door .................................................. O-7.19
INL- Inlay door .................................................................. O-7.20

Door Edge Seam
PA- Lock seam ................................................................ O-7.21
CW- Continuous welded seam ............................................ O-7.22

Door Edge Seam Option (PA only)
PAF- Lock seam edge putty filled ......................................... O-7.23
G - Lock seam edge glued without putty filled ...................... O-7.24

Continuous Welded Edge Channel
18EC- 18ga edge channel .................................................. O-7.25
16EC- 16ga edge channel .................................................. O-7.26
14EC- 14ga edge channel .................................................. O-7.27
12EC- 12ga edge channel .................................................. O-7.28

Hinge Edge Construction
BEVH- Bevel edge door / hinge edge ................................. O-7.29
SQH- Square edge door / hinge edge ................................. O-7.30
PPHEC- Pocket pivot hinge edge construction ............ O-7.31
REH- Segmented radius pivot edge for double acting door (N/A in CW) .............................. O-7.32

Lock Edge Construction
BEVL- Bevel edged door / lock edge .................................. O-7.33
OPTIONS

SQL- Square edged door / lock edge ............................................................... O-8.1
REL- Segmented radius lock edge for double acting door (N/A in CW) .... O-8.2

Door thickness
134- 1 3/4” door thickness ............................................................................... O-8.3
138- 1 3/8” door thickness ............................................................................... O-8.4
200- 2” door thickness ..................................................................................... O-8.5
214- 2 1/4” door thickness ............................................................................... O-8.6

End Channel/Cap
ST- Standard inverted end channel .................................................................. O-8.7
VIN- Vinyl cap ................................................................................................ O-8.8
FWC- Flush welded cap ................................................................................... O-8.9
FWSC- Flush welded and sealed cap ............................................................. O-8.10
RAB- Rabbeted cap ....................................................................................... O-8.11
SNAP- Snap-in cap (stainless steel door only) .............................................. O-8.12

End Channel/Cap option
CH14- 14 gauge end channel/cap ................................................................. O-8.13
CH12- 12 gauge end channel/cap ................................................................. O-8.14

Finish
P- Baked on primer for door .......................................................................... O-8.15
PC- Powder coated standard RAL color prefinished ..................................... O-8.16
PCC- Powder coated custom color prefinished ............................................... O-8.17
SETUPPC- Set-up charge for PC (net price, per order, per color) ................. O-8.18
SETUPPCC- Set-up charge for PCC (net price, per order, per color) .......... O-8.19

Label
180- Positive pressure 180 minutes ............................................................... O-8.20
20- Positive pressure 20 minutes ................................................................. O-8.21
45- Positive pressure 45 minutes ................................................................. O-8.22
60- Positive pressure 60 minutes ................................................................. O-8.23
90- Positive pressure 90 minutes ................................................................. O-8.24
CL- Label certification (construction label) ................................................ O-8.25
180R- Riveted positive pressure 180 minutes ........................................... O-8.26
90R- Riveted positive pressure 90 minutes ................................................ O-8.27
60R- Riveted positive pressure 60 minutes ............................................... O-8.28
45R- Riveted positive pressure 45 minutes ............................................... O-8.29
20R- Riveted positive pressure 20 minutes ............................................... O-8.30
CLR- Riveted label certification (construction label) .................................... O-8.31
CL1- Windstrom Class 1 -70 psf/350 ft-pds ........................................ O-8.32

Other Door Prep
PEEP- Hole for door viewer/peep hole ......................................................... O-8.33
MONOR- Prep. for monorail cut out, per leaf ........................................... O-8.34

Steel
A60-Hot Dipped galvannealed steel A60(ZF180) ........................................ O-8.35
G90-Hot Dipped galvanized steel G90(Z275) ............................................. O-8.36
OPTIONS

Undercut
34UC- 3/4” undercut ........................................................................................ O-9.1
58UC- 5/8” undercut ........................................................................................ O-9.2
18UC- 1/8” undercut (for panels) .................................................................... O-9.3
SPUC- Non standard undercut ........................................................................ O-9.4
## OPTIONS

**Vision kit and louvers**

**Sandwich kit (N Series)**

<table>
<thead>
<tr>
<th>Size</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>10” x 10” exposed</td>
<td>O-10.1</td>
</tr>
<tr>
<td>3’’ x 33” exposed</td>
<td>O-10.2</td>
</tr>
<tr>
<td>4” x 25” exposed</td>
<td>O-10.3</td>
</tr>
<tr>
<td>5” x 20” exposed</td>
<td>O-10.4</td>
</tr>
<tr>
<td>5” x 54” exposed</td>
<td>O-10.5</td>
</tr>
<tr>
<td>6” x 16” exposed</td>
<td>O-10.6</td>
</tr>
<tr>
<td>6” x 30” exposed</td>
<td>O-10.7</td>
</tr>
<tr>
<td>6” x 32” exposed</td>
<td>O-10.8</td>
</tr>
<tr>
<td>6” x 36” exposed</td>
<td>O-10.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Half glass</td>
<td>O-10.10</td>
</tr>
<tr>
<td>Two half glass</td>
<td>O-10.11</td>
</tr>
<tr>
<td>Full glass</td>
<td>O-10.12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>With channel</td>
<td>O-10.13</td>
</tr>
<tr>
<td>Without channel</td>
<td>O-10.14</td>
</tr>
</tbody>
</table>

**Flush kit (P-Series)**

<table>
<thead>
<tr>
<th>Size</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>10” x 10” exposed</td>
<td>O-10.15</td>
</tr>
<tr>
<td>5” x 20” exposed</td>
<td>O-10.16</td>
</tr>
<tr>
<td>5” x 54” exposed</td>
<td>O-10.17</td>
</tr>
<tr>
<td>6” x 16” exposed</td>
<td>O-10.18</td>
</tr>
<tr>
<td>6” x 36” exposed</td>
<td>O-10.19</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Half glass</td>
<td>O-10.20</td>
</tr>
<tr>
<td>Two half glass</td>
<td>O-10.21</td>
</tr>
<tr>
<td>Full glass</td>
<td>O-10.22</td>
</tr>
</tbody>
</table>

**Flush kit seamless (O-Series)**

<table>
<thead>
<tr>
<th>Size</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>10” x 10” exposed</td>
<td>O-10.23</td>
</tr>
<tr>
<td>5” x 20” exposed</td>
<td>O-10.24</td>
</tr>
<tr>
<td>5” x 54” exposed</td>
<td>O-10.25</td>
</tr>
<tr>
<td>6” x 16” exposed</td>
<td>O-10.26</td>
</tr>
<tr>
<td>6” x 36” exposed</td>
<td>O-10.27</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Half glass</td>
<td>O-10.28</td>
</tr>
<tr>
<td>Two half glass</td>
<td>O-10.29</td>
</tr>
<tr>
<td>Full glass</td>
<td>O-10.30</td>
</tr>
</tbody>
</table>
OPTIONS

Sandwich kit with muntins
   1H, 1H1V, 1H2V, 2H, 2H1V, 2H2V, 3H, 3H1V, 3H2V, 4H2V .................. O-11.1

Louvers
   1818LO- 18” x 18” ........................................................................................ O-11.2
   1812LO- 18” x 12” ........................................................................................ O-11.3
   1212LO- 12” x 12” ........................................................................................ O-11.4
   2412-LO- 24” x 12” ....................................................................................... O-11.5
   2418LO- 24” x 18” ........................................................................................ O-11.6
   2424LO- 24” x 24” ........................................................................................ O-11.7

Round cut out
   RCO- Round cut out (perimeter channel not available) ............................. O-11.8
### Frame Hardware Options

**Mortise Hinge**
- 45S- 4 ½” standard weight hinge reinforcement ........................................... O-12.1
- 45H- 4 ½” heavy weight hinge reinforcement ............................................. O-12.2
- 45C- 4 ½” convertible hinge reinforcement ............................................... O-12.3
- 50S- 5” standard weight hinge reinforcement ........................................... O-12.4
- 50H- 5” heavy weight hinge reinforcement ............................................. O-12.5
- 35S- 3 ½” standard weight hinge reinforcement ........................................ O-12.6
- 40S- 4” standard weight hinge reinforcement .......................................... O-12.7
- 45I- 4 ½” institutional hinge reinforcement ........................................... O-12.8
- 60S- 6” standard weight hinge reinforcement ........................................ O-12.9
- 60H- 6” heavy weight hinge reinforcement ........................................... O-12.10
- AH- prep. for anchor hinge ..................................................................... O-12.11
- MORG- Mortar guard ............................................................................... O-12.12
- SPMH- Special mortise hinge .................................................................. O-12.13

**Electrified Hardware Prep**
- EH- prep. for electric hinge ..................................................................... O-12.14
- ELBOX- Box for electric prep with knockouts ........................................ O-12.15
- EPT- prep. for electric power transfer .................................................... O-12.16
- EPTBOX- Box for power transfer with knockouts .................................... O-12.17
- ES- Prep. for electric strike ..................................................................... O-12.18
- ESBOX- Box for electric strike with knockouts ...................................... O-12.19
- DPS- Prep. for magnetic contact, hole only at head ................................. O-12.20
- DPSBOX- Box for magnetic contact with knockouts ............................... O-12.21
- DPSJ- Prep. for magnetic contact, hole only at jamb ............................... O-12.22
- RDPS- Prep. for magnetic contact with reinforcement at head ............... O-12.23
- RDPSJ- Prep. for magnetic contact with reinforcement at jamb ............. O-12.24
- SHL- Shearlock reinforcement at head ..................................................... O-12.25
- RACE- Raceway for electric hardware .................................................. O-12.26
- ELMAG- Prep. for electromagnetic lock reinforcement ........................... O-12.27

**Continuous Hinge**
- CCH- Concealed leaf continuous hinge reinforcement .............................. O-12.28
- CCEH- Concealed leaf continuous electric hinge reinforcement ............... O-12.29
- SCH- Surface continuous hinge reinforcement ....................................... O-12.30

**Double acting hinge**
- RDA- Reinforcement for double acting hinge ......................................... O-12.31
- ELIAS- Prep. for “Eliason” pivot ............................................................. O-12.32

**Invisible hinge**
- INVH- Invisible hinge reinforcement ..................................................... O-12.33
OPTIONS

Pivot
- TPIV- Prep. for top pivot ................................................................. O-13.1
- IPIV- Prep. for intermediate pivot .................................................. O-13.2
- BPIVF- Prep. for bottom pivot on floor .......................................... O-13.3
- BPIVJ- Prep. for bottom pivot in jamb .......................................... O-13.4
- CPIV- Reinforcement for corner pivot, full surface .......................... O-13.5

Pocket Pivot
- PPIV- Prep. for pocket pivot .......................................................... O-13.6

Strike
- ASA- Standard ANSI 4 7/8” strike reinforcement .............................. O-13.7
- ASA12- Standard ANSI 4 7/8” strike reinforcement in 12ga .............. O-13.8
- ASA10- Standard ANSI 4 7/8” strike reinforcement in 10ga ............. O-13.9
- ASA7- Standard ANSI 4 7/8” strike reinforcement in 7ga .............. O-13.10
- T- Standard 2 3/4” “T” strike reinforcement .................................. O-13.11
- DL234- Cylindrical deadlock strike reinforcement ........................... O-13.12
- DL234-12- Cylindrical deadlock strike reinforcement in 12ga .......... O-13.13
- DL312M- 3 1/2” mortise deadlock strike reinforcement .................. O-13.14
- DL478- ANSI Standard 4 7/8” deadlock strike reinforcement ........... O-13.15
- IL4- Interconnected lock strike 4” C/C (T+DL234) ............................ O-13.16
- IL512- Interconnected lock strike 5 1/2” C/C (T+DL234) .................. O-13.17
- DLS- Prep. for double lipped strike reinforcement .......................... O-13.18
- ESTOP- Prep. for emergency stop release reinforcement ................ O-13.19
- RHL- Roller latch strike reinforcement, head ............................... O-13.20
- RLJ- Roller latch strike reinforcement, jamb ................................ O-13.21
- SPS- Special strike ........................................................................ O-13.22

Exit Device Strike
- RED- Rim exit device reinforcement ................................................ O-13.23
- SVRS- Prep. for surface vertical rod strike ....................................... O-13.24
- CVRS- Prep. for concealed vertical rod strike ................................. O-13.25

Bolt Strike
- FBS- ANSI A156.16 flush bolt strike reinforcement ......................... O-13.26
- RFBS- Reversible flush bolt strike reinforcement ............................ O-13.27
- SBS- Surface bolt strike reinforcement ......................................... O-13.28
- SLFBS- Self latching flush bolt strike reinforcement ...................... O-13.29

Closers
- RAC- Regular arm closer reinforcement ......................................... O-13.30
- PAC- Parallel arm closer reinforcement ......................................... O-13.31
- RPAC- Regular and parallel arm closer reinforcement .................... O-13.32
- TJC- Top jamb closer reinforcement ............................................... O-13.33
- FWR- Full width regular arm closer reinforcement ......................... O-13.34
- FWP- Full width parallel arm closer reinforcement ...................... O-13.35
- FWRP- Full width regular and parallel arm closer reinforcement ....... O-13.36
- FWTJ- Full width top jamb closer reinforcement ........................... O-13.37
- CCR- Concealed closer reinforcement ............................................ O-13.38
OPTIONS

COHS- Prep. for concealed overhead stop .................................................... O-14.1
SOHS- Prep. for surface overhead stop ......................................................... O-14.2
FS- Full sleeve closer reinforcement (12ga) .................................................. O-14.3
FWFS- Full width full sleeve closer reinforcement (12ga) ......................... O-14.4
Coordinator
FCR- Face mounted coordinator reinforcement ........................................... O-14.5
SCR- Soffit mounted coordinator reinforcement........................................ O-14.6
OPTIONS

Engineered Frame Options

Anchors – KD frames

- SBA- Screw base anchor ................................................................. O-15.1
- DSA- Drywall strap anchor ............................................................... O-15.2
- SDS- Snap in for drywall partition ................................................. O-15.3
- CPA- Compression anchor ................................................................. O-15.4
- WTP- Wood trim prep .................................................................... O-15.5

Anchors- Welded frames

- ZBA- “Z” bracket anchor ................................................................. O-15.6
- ZBA2- “Z” bracket anchor for double layer of drywall .................. O-15.7
- SWS- Snap in for wood and steel stud ............................................. O-15.8
- DCA- Combination wood and steel stud anchor ............................... O-15.9
- TMA- “T” masonry anchor .............................................................. O-15.10
- WMA- Wire masonry anchor ........................................................... O-15.11
- EWA- Existing wall anchor ............................................................... O-15.12
- EWA14- Existing wall anchor for ¼” screw ............................... O-15.13
- EWA14NOR- Existing wall anchor for ¼” screw without reinforcing O-15.14
- EWANOR- Existing wall anchor without reinforcing ....................... O-15.15
- EWAP- Existing wall anchor with plug .......................................... O-15.16
- EWAP14- Existing wall anchor with plug for ¼” screw ................. O-15.17
- EWAT- Existing wall anchor with tube ............................................ O-15.18
- EWAT14- Existing wall anchor with tube for ¼” screw ................. O-15.19
- ATMA- Adjustable “T” anchor ......................................................... O-15.20
- MBA- Metal builder anchor ............................................................. O-15.21
- DYN4- 4” long dynabolt for existing wall anchor ........................... O-15.22
- DYN5- 5” long dynabolt for existing wall anchor ........................... O-15.23

Floor/Base anchor

- FA- Floor anchor ........................................................................... O-15.24
- INVFA- Inverted floor anchor ........................................................ O-15.25
- ADJFA- Adjustable floor anchor .................................................... O-15.26

Split frame anchors

- ASFA- Additional split frame anchor for two layers of drywall ....... O-15.27

Frame assemblies

- KD- Knocked down corner with tabs .............................................. O-15.28
- KDI- Knock down intersection ....................................................... O-15.29
- KDS- Knock down corner with screws .......................................... O-15.30
- FW- Face welded corner ............................................................... O-15.31
- CFW- Full depth continuous welded corner ................................. O-15.32
- FWI- Face welded intersection ..................................................... O-15.33
- NSW- Non standard welded corner ............................................. O-15.34
- SW- Sanitary weld corner ........................................................... O-15.35
- WBO- Welded by others (KD w/o tabs) ........................................ O-15.36
OPTIONS

MFS- Mechanical field splice for oversized units ........................................... O-16.1
SOU- Splice for oversized units ........................................................................ O-16.2
RM- Removable mullion/transom bar ............................................................. O-16.3
RMF- Removable mullion with floor anchor ................................................... O-16.4
WFS- Splice for field welding for oversized units ........................................... O-16.5

Finish
TSF-P- Baked on primer for three sided frame .............................................. O-16.6
BL-P- Baked on primer for borrowed lite ....................................................... O-16.6
SL-P- Baked on primer for sidelight ............................................................... O-16.6
TF-P- Baked on primer for transom frame ..................................................... O-16.6
FPRO-P- Baked on primer for frame profile .................................................. O-16.6
DSL-P- Baked on primer for double sidelight ................................................. O-16.6
CF-P- Baked on primer for custom frame elevation ....................................... O-16.6

TSF-PC- Powder coated standard color prefinished for three sided frame ... O-16.7
BL-PC- Powder coated standard color prefinished for borrowed lite .......... O-16.7
SL-PC- Powder coated standard color prefinished for sidelight ................ O-16.7
TF-PC- Powder coated standard color prefinished for transom frame .......... O-16.7
FPRO-PC- Powder coated standard color prefinished for frame profile .... O-16.7
DSL-PC- Powder coated standard color prefinished for double sidelight.... O-16.7
CF-PC- Powder coated standard color prefinished for custom frame ........ O-16.7

TSF-PCC- Powder coated custom color prefinished for three sided frame ... O-16.7
BL-PCC- Powder coated custom color prefinished for borrowed lite .......... O-16.7
SL-PCC- Powder coated custom color prefinished for sidelight ................ O-16.7
TF-PCC- Powder coated custom color prefinished for transom frame .......... O-16.7
FPRO-PCC- Powder coated custom color prefinished for frame profile .... O-16.7
DSL-PCC- Powder coated custom color prefinished for double sidelight..... O-16.7
CF-PCC- Powder coated custom color prefinished for custom frame ....... O-16.7

Hospital stops
HS45- Hospital stops 45° ................................................................. O-16.27
HS90- Hospital stops 90° ................................................................. O-16.28

Removable hardware mullion
HWEMUA- Removable hardware mullion reinf. without filler block ....... O-16.29
HWEMUB- Removable hardware mullion reinf. with filler block ............. O-16.30
MW- Sound deadening mineral wool ......................................................... O-16.31
PBH- Reinforcing for by passing or bifold hardware .................................. O-16.32
UHD14- U reinforcement for head only, 14ga ........................................ O-16.33
UJMB14- U reinforcement for jamb only, 14ga ......................................... O-16.34
UHD12- U reinforcement for head only, 12ga ........................................ O-16.35
UJMB12- U reinforcement for jamb only, 12ga ......................................... O-16.36

Frame label
180- Positive pressure 180 minutes ......................................................... O-16.37
90- Positive pressure 90 minutes ............................................................ O-16.38
60- Positive pressure 60 minutes ............................................................ O-16.39
45- Positive pressure 45 minutes ............................................................ O-16.40
OPTIONS

CL- Label certification ................................................................................... O-17.1
180E- Embossed positive pressure 180 minutes ........................................... O-17.2
90E- Embossed positive pressure 90 minutes ............................................. O-17.3
45E- Embossed positive pressure 45 minutes .......................................... O-17.4
180R- Riveted positive pressure 180 minutes ............................................ O-17.5
90R- Riveted positive pressure 90 minutes ............................................... O-17.6
60R- Riveted positive pressure 60 minutes ............................................. O-17.7
45R- Riveted positive pressure 45 minutes ............................................. O-17.8
CLR- Riveted label certification ................................................................ O-17.9
CL1- Windstorm class 1 – 70psf/350 ft-lbs ............................................. O-17.10

Specialty Frame
COMM- Communicating frame .................................................................. O-17.11
DUTCH- Dutch frame ................................................................................. O-17.12

Sill
SI45- 2” sill with miter ends (4 sided frame) ........................................... O-17.13
S190- ½” sill with square ends ................................................................. O-17.14
WSI- Welded sill option .............................................................................

Steel material
A40- Hot dipped galvannealed steel (ZF120) ............................................ O-17.16
A60- Hot dipped galvannealed steel (ZF180) ............................................ O-17.17
G90- Hot dipped glavanized steel (Z275) ................................................ O-17.18

Profile
138- Frame profile for 1 3/8” door thickness ........................................... O-17.19
200- Frame profile for 2” door thickness .................................................. O-17.20
214- Frame profile for 2 1/4” door thickness ........................................... O-17.21
SPDT- Frame profile for special door thickness ........................................ O-17.22
TB- Thermal break frame ........................................................................ O-17.23
URB- Unequal rabbet ............................................................................. O-17.24
CG- Centered glass profile .................................................................... O-17.25
CGG- Caulking groove at returns ............................................................. O-17.26
DSO2- Double stepped Ogee (2 1/4" face) .............................................. O-17.27
DSO3- Double stepped Ogee (3” face) ..................................................... O-17.28
HEM- Hemmed returns .......................................................................... O-17.29
KF- Kerf frame profile ........................................................................... O-17.30
SLW- Shipped loose weatherstrip for Kerf frame .................................... O-17.31

R12- Radius edges 1/2” ........................................................................... O-17.32
R34- Radius edges 3/4” ........................................................................... O-17.33
SL- Shadow Line profile ........................................................................ O-17.34

SPS- Splayed stop (at single rabbet profile only) ...................................... O-17.35
F12- Upcharge for face greater than 12” .................................................. O-17.36
JD15- Upcharge for jamb depth greater than 15” .................................... O-17.37
SPFD- Upcharge for special faces dimensions ........................................ O-17.38
SPPD- Upcharge for profile dimensions ................................................ O-17.39
OPTIONS

Lead lined option
LLFW116- Lead lined frame full width 1/16” .............................................. O-18.1
LLFW18- Lead lined frame full width 1/8” .................................................. O-18.2
LLHW116- Lead line frame half width 1/16”................................................ O-18.3
LLHW18- Lead line frame half width 1/8” .................................................. O-18.4
4 1/2" standard weight hinge reinforcement (0.134), 7ga
Projection welded

3/8" recommended backset on frame.
* Maybe greater for 16 and thicker gage door.
** Tested screw hold for 12-24: 1,200 lbf (per screw)
4 1/2" heavy weight hinge reinforcement (0.180), 7ga
Projection welded

3/8" recommended backset on frame.
* Maybe greater for 16 and thicker gage door.
** Tested screw hold for 12-24: 1,200 lbf (per screw)
4 1/2" convertible hinge reinforcement (0.134/0.180), 7ga
Projection welded

Remove raisers by using 5/16" drill bit to obtain 0.180 dimension
3/8" recommended backset on frame.
* Maybe greater for 16 and thicker gage door.
** Tested screw hold for 12-24: 1,200 lbf (per screw)
4 1/2" reversible hinge reinforcement (0.134), 7ga
Projection welded

3/8" recommended backset on frame.

** Tested screw hold for 12-24: 1,200 lbf (per screw)
4 1/2" reversible convertible hinge reinforcement (0.134/0.180), 7ga
Projection welded

3/8" recommended backset on frame.

** Tested screw hold for 12-24: 1,200 lbf (per screw)**
5" regular weight hinge reinforcement (0.146), 7ga
Projection welded

3/8" recommended backset on frame.
* Maybe greater for 16 and thicker gage door.
5" heavy weight hinge reinforcement (0.190), 7ga
Projection welded

3/8" recommended backset on frame.
* Maybe greater for 16 and thicker gage door.
3 1/2" standard weight hinge reinforcement, 10ga
Projection welded

* 5/16" recommended backset on frame.
4" regular weight hinge reinforcement, 10ga
Projection welded

3/8" recommended backset on frame.
* Maybe greater for 16 and thicker gage door.
4 1/2" institutional hinge reinforcement (0.180), 7ga
Projection welded

3/8" recommended backset on frame.
* Maybe greater for 16 and thicker gage door.
** Tested screw hold for 12-24: 1,200 lbf (per screw)
6" regular weight hinge reinforcement (0.160), 7ga
Projection welded

3/8" recommended backset on frame.
* Maybe greater for 16 and thicker gage door.
6" heavy weight hinge reinforcement (0.203), 7ga
Projection welded

3/8" recommended backset on frame.
* Maybe greater for 16 and thicker gage door.
Prep. for anchor hinge, 10ga
Projection welded

*manufacturer's template to be provided
Double mortising of hinge reinforcement, 7ga
Projection welded

3/8" recommended backset on frame.
* Maybe greater for 16 and thicker gage door.
Per butt hinge height, regular or HD
Prep. for electrical hinge, 7ga
Projection welded

4 1/2" electric hinge prep. shown, also available for other heights.
* 3/8" recommended backset on frame. Maybe greater for 16 and thicker gage door.
** fits most of electric hinges, please verify toward model intended.
Prep. for electrical power transfer, 12ga
Projection welded

8'10" to 10'0"
7'8"
53 7/8"
47 7/8"
42 7/8"
24 7/8"

up to 7'6"
up to 7'6"
3 hinges
4 hinges

varies

53 7/8"

*manufacturer's template to be provided
Raceway might run through top or bottom of door if presence of a kit.

Wire in the raceway to pull electric connector through.

3/4" interior diameter

Electrified hardware
Box for electric exit device, 16ga

hinge side

4.000

12.000

panic’s height
Concealed leaf continuous hinge reinforcement, 14ga
Projection welded
Concealed leaf continuous electric hinge reinforcement, 14ga
Projection welded

*manufacturer's template to be provided
Surface continuous hinge reinforcement, 16ga
Cold fused
Invisible hinge reinforcement, 10ga
Projection welded

*manufacturer's template to be provided
Prep. for top pivot, 10ga

Center hung

Offset hung

*manufacturer's template to be provided
Intermediate pivot prep., 10ga

Offset hung

*manufacturer's template to be provided
Centered at mid height of opening up to 7'0"
Prep. for bottom pivot, 10ga

Center hung

Offset hung

*manufacturer's template to be provided
Prep. for pocket pivot, 10ga
Projection welded

*manufacturer's template to be provided
Cylindrical lock reinforcement, 16ga
Projection welded

Centered latch. Tapped extruded holes as much threads as if a 12ga reinforcement.
Cylindrical lock reinforcement, 16ga, with thru bolts*
Projection welded

Centered latch. Tapped extruded holes as much threads as if a 12ga reinforcement.
*Manufacturer’s template to be provided
Interconnected lock 4" C/C reinforcement (161TB+CYLDL), 12ga

Projection welded

Centered latch. Tapped extruded holes as much threads as if a 12ga reinforcement.

*Maybe greater for 16 and thicker gage door.
Interconnected lock 5 1/2” C/C reinforcement (161TB+CYLDDL), 12ga

Projection welded

*Maybe greater for 16 and thicker gage door.
Mortise lock reinforcement, 12ga
Projection welded

Per ANSI A156.13 specifications
Mortise lock reinforcement with function holes, 12ga
Projection welded

Per ANSI A156.13 specifications
Function holes: Manufacturer’s template to be provided.
Digital lock prep, 12ga
Projection welded

Tapped extruded holes as much threads as if a 12ga reinforcement
Function holes: Manufacturer's template to be provided.
Digital lock prep, 12ga
Projection welded

Function holes: Manufacturer's template to be provided.
Pre-assembly lock reinforcement
Cold fused

*v*manufacturer's template to be provided
Cylindrical deadlock reinforcement, 16ga
Projection welded

Centered latch. Tapped extruded holes as much threads as if a 12ga reinforcement.
*Manufacturer’s template to be provided.
Mortise deadlock reinforcement, 12ga
Projection welded

16ga
4\(\frac{3}{4}\)

*Manufacturer’s template to be provided.
Mortise deadlock reinforcement with function holes, 12ga
Projection welded

*Manufacturer's template to be provided.
Rim exit device reinforcement
Cold fused

16ga steel plate

core varies per door series

16ga steel plate

4"

12"

\(\frac{3}{4}\)

\(\frac{3}{4}\)

\(\frac{3}{4}\)

per template
Rim exit device reinforcement with function holes

Cold fused

16ga steel plate

Core varies per door series

16ga steel plate

4"

12"

16"

3/4"

4 3/4"

*Manufacturer's template to be provided.
Surface vertical rod exit device reinforcement with function holes
Cold fused

*manufacturer's template to be provided.*
Mortise exit device reinforcements
Cold fused

16ga steel plate

core varies per door series

16ga steel plate

see 86ED for edge prep.

per manufacturer location

4\(\frac{3}{4}\)"
Mortise exit device reinforcements with function holes
Cold fused

- 16ga steel plate
- 16ga steel plate
- Core varies per door series
- See 86FH for edge prep.
- Per manufacturer location

4\(\frac{3}{4}\)"  
3"  
4"

12"

16"

4\(\frac{3}{4}\)"

*Manufacturer's template to be provided.
Concealed vertical rod exit device reinforcements
Cold fused

*manufacturer's template to be provided.
Impact concealed vertical rod exit device reinforcements
Cold fused

Manufacturer's template to be provided.
Impact mortise exit device reinforcement
Cold fused

see 86ED for edge prep.

per manufacturer location

4 3/4"

Manufacturer's template to be provided.
Exit device surface reinforcements, 12ga
Cold fused

- RIM
- RIMFH
- SVR
- SVRFH
- MED
- MEDFH

12ga steel plate
core varies per door series
Exit device surface reinforcements, 14ga
Cold fused

14ga steel plate

core varies per door series

14ga steel plate
Auxiliary fire latch, 12ga
Projection welded

*manufacturer's template to be provided
Less bottom rod prep, will require an auxiliary fire latch at rated door.
Standard ANSI 4 7/8" strike reinforcement, 16ga
Projection welded

Tapped extruded holes as much threads as if a 12ga reinforcement.
Standard ANSI 4 7/8" strike reinforcement, 12ga
Projection welded
Standard 2 3/4" "T" strike reinforcement, 12ga
Projection welded
Cylindrical dead lock strike reinforcement, 12ga
Projection welded
3 1/2" mortise dead lock strike reinforcement, 12ga
Projection welded
ANSI standard 4 7/8" dead lock strike reinforcement, 16ga
Projection welded

Tapped extruded holes as much threads as if a 12ga reinforcement.
Prep. for electric strike, 12ga
Projection welded

*manufacturer's template to be provided
Prep. for open back strike, 12ga
Projection welded

*manufacturer's template to be provided
Rim strike reinforcement, 16ga
Cold fused

16ga steel plate
core varies per door series
16ga steel plate

per panic's height

4"
12"
Ansi 156-16 flush bolt reinforcements, 12ga
Projection welded

Up to 8'0" top rod at 12", must specify if door over 8'0"
Surface bolt reinforcement, 16ga
Cold fused

16ga steel plate

Core varies per door series

16ga steel plate
ANSI 156-16 flush bolt strike in panel, 18ga
Projection welded

Tapped extruded holes as much threads as is if a 12ga reinforcement
Standard closer reinforcement, 16ga
Cold fused

16ga steel plate

Core varies per door series

16ga steel plate
Standard closer reinforcement, 14ga
Cold fused

14ga steel plate

core varies per door series

14ga steel plate
Standard closer reinforcement, 12ga
Cold fused

12ga steel plate
polystyrene
12ga steel plate
Concealed in door closer prep., 12ga

*manufacturer's template to be provided
Top cap options not available
Prep. for concealed overhead stop

*manufacturer's template to be provided
Top cap options not available
Full width closer reinforcement, 14ga
Cold fused

14ga steel plate

core varies per door series

14ga steel plate
Push and pull reinforcement, 16ga
Cold fused

16ga steel plate

24"
4"
3 4

equal
core varies per door series

16ga steel plate
Pull with grab bar reinforcements, 16ga
Cold fused

core varies per door series

16ga steel plate

16ga steel plate

24”

4”

3/4”

3/4”

28”

28”
Flush pull with capping (push, pull or both sides), 18ga
Cold fused

*manufacturer's template to be provided
Shearlock reinforcement

*manufacturer's template to be provided
Roller latch/catch prep., 12ga
tack welded

*manufacturer's template to be provided
Prep. for magnetic contact with reinforcement, 12ga

*manufacturer's template to be provided
Prep. for automatic door bottom, 16ga
Tack welded

*manufacturer's template to be provided
**standard inverted channel for up to 7/8" high automatic door bottom
Flat bar astragal, 12ga

Inactive door push side

Active door pull side

Available screwed or welded, see options SAS and WAS.
"Z" Astragal, 14ga

Available screwed or welded, see options SAS and WAS. Minus 1/16" in door net width.
Deviated astragal for single leaf, 14ga

Available screwed or welded, see options SAS and WAS.
1/16" lead lined flat bar astragal, 16ga

Inactive door push side

Active door pull side

7/8" ± 1/16"

Available screwed or welded, see options SAS and WAS.
Extra for screwed astragal to the door

"Z" astragal

Inactive Door  Active Door

flat astragal

Inactive door push side  Active door pull side

deviated astragal

See item #00114 for screw details.
Extra for welded astragal to the door

"Z" astragal

Inactive Door  Active Door

Inactive Door  Active Door

flat astragal

Inactive door push side  Active door pull side

deviated astragal
**Full dutch door shelf**

Shipped loose

- **Finished door width**
  - 10”
  - 10”
  - 12”

*brackets, 16ga spot welded to shelf, to be screwed to door*
Half dutch door shelf
Shipped loose

Finished door width

10”

10”

8”

Brackets, 16ga spot welded to shelf, to be screwed to door
One panel
Available 18ga only with honeycomb or polystyrene core

<table>
<thead>
<tr>
<th>Nominal Dimension</th>
<th>Net size Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>3'－4&quot;</td>
<td>8 3/8</td>
</tr>
<tr>
<td>3'－2&quot;</td>
<td>7 3/8</td>
</tr>
<tr>
<td>3'－0&quot;</td>
<td>6 3/8</td>
</tr>
<tr>
<td>2'－10&quot;</td>
<td>5 3/8</td>
</tr>
<tr>
<td>2'－8&quot;</td>
<td>4 3/8</td>
</tr>
<tr>
<td>2'－6&quot;</td>
<td>3 3/8</td>
</tr>
</tbody>
</table>

*Maximum net height 83 1/8"

NOTES: Doors are available rated up to 3hrs with honeycomb core. (90mm maximum with polystyrene core)

- All hardware preps, including panic devices, will be located per commercial height and/or per manufacturer’s template, without consideration of aesthetic.
- will require an irregular backset at lock for 2'8" and 2'6" doors.
Two panels soft arch door with embossing
Available 18ga only with honeycomb or polystyrene core

Custom embossed:
V- type

U- type
not available

<table>
<thead>
<tr>
<th>Nominal Dimension - A-</th>
<th>Net size Dimension - B-</th>
</tr>
</thead>
<tbody>
<tr>
<td>3’-4”</td>
<td>8 3/8</td>
</tr>
<tr>
<td>3’-2”</td>
<td>7 3/8</td>
</tr>
<tr>
<td>3’-0”</td>
<td>6 3/8</td>
</tr>
<tr>
<td>2’-10”</td>
<td>5 3/8</td>
</tr>
<tr>
<td>2’-8”</td>
<td>4 3/8</td>
</tr>
<tr>
<td>2’-6”</td>
<td>3 3/8</td>
</tr>
</tbody>
</table>

*Maximum net height 83 1/8”
CW Door only

NOTES: Doors are available rated up to 3hrs with honeycomb core. (90mm maximum with polystyrene core)
: All hardware preps, including panic devices, will be located per commercial height and/or per manufacturer’s template, without consideration of aesthetic.
: will require an irregular backset at lock for 2’8” and 2’6” doors.
Two panels
Available 18ga only with honeycomb or polystyrene core

NOTES: Doors are available rated up to 3hrs with honeycomb core. (90mn maximum with polystyrene core)
- All hardware preps, including panic devices, will be located per commercial height
  and/or per manufacturer’s template, without consideration of aesthetic.
- will require an irregular backset at lock for 2’8” and 2’6” doors.
- cut out will be 1/8” higher and larger than dimensions shown of the panel

<table>
<thead>
<tr>
<th>Nominal Dimension</th>
<th>Net size Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>3’-4”</td>
<td>8 3/8</td>
</tr>
<tr>
<td>3’-2”</td>
<td>7 3/8</td>
</tr>
<tr>
<td>3’-0”</td>
<td>6 3/8</td>
</tr>
<tr>
<td>2’-10”</td>
<td>5 3/8</td>
</tr>
<tr>
<td>2’-8”</td>
<td>4 3/8</td>
</tr>
<tr>
<td>2’-6”</td>
<td>3 3/8</td>
</tr>
</tbody>
</table>

*Maximum net height 83 1/8”

CW Door only
Two panels soft arch
Available 18ga only with honeycomb or polystyrene core

NOTES: Doors are available rated up to 3hrs with honeycomb core. (90mn maximum with polystyrene core)
: All hardware preps, including panic devices, will be located per commercial height
  and/or per manufacturer’s template, without consideration of aesthetic.
: will require an irregular backset at lock for 2’8” and 2’6” doors.
: cut out will be 1/8” higher and larger than dimensions shown of the panel

<table>
<thead>
<tr>
<th>Nominal Dimension</th>
<th>Net size Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>3’-4”</td>
<td>8 3/8</td>
</tr>
<tr>
<td>3’-2”</td>
<td>7 3/8</td>
</tr>
<tr>
<td>3’-0”</td>
<td>6 3/8</td>
</tr>
<tr>
<td>2’-10”</td>
<td>5 3/8</td>
</tr>
<tr>
<td>2’-8”</td>
<td>4 3/8</td>
</tr>
<tr>
<td>2’-6”</td>
<td>3 3/8</td>
</tr>
</tbody>
</table>

*Maximum net height 83 1/8”
Four panels
Available 18ga only with honeycomb or polystyrene core

 Nominal Dimension | Net size Dimension
 A | B |
 3'-4" | 8 3/8 |
 3'-2" | 7 3/8 |
 3'-0" | 6 3/8 |
 2'-10" | 5 3/8 |

*Maximum net height 83 1/8"

CW Door only

NOTES: Doors are available rated up to 3hrs with honeycomb core. (90mn maximum with polystyrene core)
  : All hardware preps, including panic devices, will be located per commercial height and/or per manufacturer’s template, without consideration of aesthetic.
  : cut out will be 1/8” higher and larger than dimensions shown of the panel.
Six panels
Available 18ga only with honeycomb or polystyrene core

NOTES: Doors are available rated up to 3hrs with honeycomb core. (90mn maximum with polystyrene core)

- All hardware prep, including panic devices, will be located per commercial height and/or per manufacturer’s template, without consideration of aesthetic.
- Cut out will be 1/8” higher and larger than dimensions shown of the panel

<table>
<thead>
<tr>
<th>Nominal Dimension -A-</th>
<th>Net size Dimension -B-</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ 3’-4”</td>
<td>8 11/32</td>
</tr>
<tr>
<td>□ 3’-2”</td>
<td>7 11/32</td>
</tr>
<tr>
<td>3’-0”</td>
<td>6 11/32</td>
</tr>
<tr>
<td>2’-10”</td>
<td>5 11/32</td>
</tr>
</tbody>
</table>

*Maximum net height 83 1/8”
□ CW Door only
Flush with 2 panels at bottom
Available 18ga only with honeycomb or polystyrene core

with regular vision, narrow lite of half glass lite kit.

<table>
<thead>
<tr>
<th>Nominal Dimension</th>
<th>Net size Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>3'-4&quot;</td>
<td>8 11/32</td>
</tr>
<tr>
<td>3'-2&quot;</td>
<td>7 11/32</td>
</tr>
<tr>
<td>3'-0&quot;</td>
<td>6 11/32</td>
</tr>
<tr>
<td>2'-10&quot;</td>
<td>5 11/32</td>
</tr>
<tr>
<td>2'-8&quot;</td>
<td>4 11/32</td>
</tr>
<tr>
<td>2'-6&quot;</td>
<td>3 11/32</td>
</tr>
</tbody>
</table>

*Maximum net height 83 1/8"*

□ CW Door only

NOTES: Doors are available rated up to 3hrs with honeycomb core. (90mn maximum with polystyrene core)
- All hardware preps, including panic devices, will be located per commercial height and/or per manufacturer's template, without consideration of aesthetic.
- will require an irregular backset at lock for 2'8" and 2'6" doors.
- cut out will be 1/8" higher and larger than dimensions shown of the panel
Narrow six panels
Available 18ga only with honeycomb or polystyrene core

NOTES: Doors are available rated up to 3hrs with honeycomb core. (90mn maximum with polystyrene core)
  : All hardware preps, including panic devices, will be located per commercial height
  and/or per manufacturer’s template, without consideration of aesthetic.
  : cut out will be 1/8" higher and larger than dimensions shown of the panel
Dutch door (shelf not included)

See FDD and HDD for details on our shelves.
Custom embossed door
Available in 18 or 16ga, in A40 or A60 or stainless steel

Maximum 4'0" door width
Recessed panel door
Available in 18 or 16ga, in A40 or A60. 18ga panels.

All dimensions from nominal opening
**Inlay door**

Door available in 18ga, with A40 or A60 galvanneal
Inlay material: painted galvanneal, stainless steel, plastic laminate, brass and wood molding.

[Diagram of inlay door models INL 101, INL 102, and INL 103 with signage, text, and logo and/or company name sections.]
Lock seam

Available beveled or square see options BEVH, BEVL, SQH & SQL
Continuous welded seamless

standard 18ga edge channel

continuously welded seam, grinded smooth and putty filled

Available beveled or square see options BEVH, BEVL, SQH & SQL
Lock seam edge putty filled

Continuous glue seal, putty filled and grinded smooth

Available at beveled or square edge doors.
Lock seam edge glued without putty filled

Available at beveled or square edge doors.
18ga edge channel

standard 18ga edge channel
16ga edge channel

optional 16ga edge channel
14ga edge channel

optional 14ga edge channel
12ga edge channel

optional 12ga edge channel
Bevel edged door

Standard at doors with butt hinges.
Square edged door

Standard at doors with continuous hinge.
*manufacturer's template to be provided, see page O-4.26 for additional detail.
Segmented radius pivot edge for double acting door

Edge putty filled if PAF or CW on lock edge.
Bevel edged door

Standard at lock edge
Square edged door

PA

CW

Standard at strike edge
Segmented radius lock edge for double acting door

Edge putty filled if PAF or CW on hinge edge.
**1 3/4" door thickness**

Nominal thickness shown, may vary with gage.

Beveled edge shown, square edge available.
1 3/8" door thickness
Nominal thickness shown, may vary with gage.

Beveled edge shown, square edge available.
Polystyrene core only.
**2" door thickness**
Nominal thickness shown, may vary with gage.

Beveled edge shown, square edge available.  
Polystyrene core only.  
Standard 1/4" hinge backset unless otherwise noted.
2 1/4" door thickness
Nominal thickness shown, may vary with gage.

Beveled edge shown, square edge available.
Polystyrene core only.
Standard 1/4" hinge backset unless otherwise noted.
Standard inverted end channel
Projection welded

Available for top and/or bottom
*16ga, 14ga & 12ga optional see CH14 & CH12
Vinyl cap

extruded PVC

Available for top and/or bottom
Flush welded cap
Projection welded

Available for top and/or bottom
*16ga, 14ga & 12ga optional see CH14 & CH12
Flush welded and sealed cap
Projection welded

Available for top and/or bottom
*16ga, 14ga & 12ga optional see CH14 & CH12
Rabbeted Cap, 16ga
Projection welded

Top only, to be use when rabbeted transom panel.
Snap-in cap, 18ga

At stainless steel door only. Available for top and bottom.
14 gauge end channel/cap
Projection welded

Available for top and/or bottom
12 gauge end channel/cap
Tack and/or plug welded

Available for top and/or bottom
Baked on primer for door

Grey Waterborne Primer

General Properties
A quick drying water-based primer designed for application to galvannealed surfaces. This product has excellent adhesion and corrosion resistance properties and is compatible with a wide variety of architectural topcoat paints. This primer can be topcoated immediately, or at any time in the future. Note that per NAAMM/HMMA 840 it is recommended to apply the finish coat of paint within 30 days of delivery. This product contains low VOC’s and is engineered to surpass ANSI A250.10 Specifications when applied to galvannealed substrates.

Product Information
Generic type: Acrylic resins  Mix ratio: Single component
Pigment type: Anti-corrosive  Viscosity: 68 -72 K.U.
Color: grey  V.O.C. mixed: 141 g/l (1.17 lbs/gla)
Finish: low sheen  Temperature resistance (dry):
Average volume solids: 34.3%  75°C (167°F) continuous
Thinner: water  100°C (212°F) intermittent

Recommended Topcoats
Topcoat with any water or solvent base architectural paints.

Performance Criteria Tested to ANSI A250.10-1998(R2011)
Salt spray test:
Standard practice for operating salt spray (fog) apparatus
Method: ASTM B117-03
“X” scribe per ASTM D1654-92 (2000) section 4.1 and 5.1
120 hours continuous exposure
Acceptance criteria:
rust grade less than 6 as defined by ASTM D610-01
undercut less than 1/8” on each side
Performance on galvanneal: pass

Condensation testing (humidity)
Standard practice for testing water resistance of coatings using controlled condensation
Method: ASTM D4585-99
100°F minimum temperature
240 hours continuous exposure
Acceptance criteria:
any amount of #8 blisters as defined by ASTM D714-02
less or equal few #6 blisters as defined by ASTM D714-02
Performance on galvanneal: pass

Impact test:
Standard test method for resistance of organic coatings to the effect of rapid deformation
Method: ASTM D2794-93 (1999)e1
20 inch pounds direct using a Gardner impact tester with ½” diameter ball at 70-75°F
tape (3/4” wide) pull off test using #600 Scotch tape
Acceptance criteria:
no paint film removal other than an area 1/8” in diameter at the center of the impact test
Performance on galvanneal: pass

Film adhesion test:
Standard test methods for measuring adhesion by tape test
Method: ASTM D3359-02
method B with 11 parallel cuts made 1mm apart
tape (1” wide) pull off test
Acceptance criteria:
less or equal 3B as defined by ASTM D3359-02
less or equal 5 -15 % film removal
Performance on galvanneal: pass
**Powder coated standard color prefinished at doors**

General Properties
POWDURA RAL® Series Durable Polyester TGIC-free Powder Coatings are recommended for a broad range of interior/exterior decorative applications. They are designed for superior weatherability compared to standard polyester powder coatings.

Advantages
- Excellent exterior color and gloss retention
- Excellent overbake resistance
- Good chemical resistance

Application
- Cure schedule: 10mn @ 205 C
- Film thickness range (mils): 2.0-3.0

Attributes
- Specific gravity (g/ml): 1.68
- Coverage at 1.0 Mil (ft²/lb): 114.8
- 60° gloss (ASTM D-523): 28-42
- Adhesion (ASTM D-3359): 5B
- Flexibility (ASTM D-522): Pass 1/8”
- Pencil hardness (ASTM D-3363): H-2H
- Impact resistance (in lb.) (ASTM D-2794): Dir 160 in-lbs, Rev 160 in-lbs

Performance measured using 24-gauge Bonderite® 1000 test panels.

Available at HC and STW core doors only
See www.ralcolor.com for color choices
Positive pressure 180 minutes
Paper thin stick on label with protective film

Located between 1st and 2nd hinge prep when butt hinges or at top channel when continuous hinge.
Positive pressure 20 minutes
Paper thin stick on label with protective film

Located between 1st and 2nd hinge prep when butt hinges or
at top channel when continuous hinge.
Positive pressure 45 minutes
Paper thin stick on label with protective film

Located between 1st and 2nd hinge prep when butt hinges or at top channel when continuous hinge.
Positive pressure 60 minutes
Paper thin stick on label with protective film

Located between 1st and 2nd hinge prep when butt hinges or
at top channel when continuous hinge.
Positive pressure 90 minutes
Paper thin stick on label with protective film

Listed Fire Door
1 1/2 hour rating in
Positive Pressure
Temperature rise > 650°F

De La Fontaine
U.S.A.

Located between 1st and 2nd hinge prep when butt hinges or at top channel when continuous hinge.
**Construction label**

Paper thin stick on label with protective film

---

**LABEL CERTIFICATION**
**FIRE DOOR OR FRAME**
**LISTED HARDWARE REQUIRED**

This door or frame exceeds the limitation that we tested, therefore this label certification is submitted in lieu of a fire door or frame label. The materials and manufacturing process conform completely with our fire door or frame procedure with Warnock Hersey (WH)  

---

de La Fontaine  
U.S.A.

---

000000–DLF

---

Located between 1st and 2nd hinge prep when butt hinges or at top channel when continuous hinge.
Positive pressure 180 minutes
Riveted

Located between 1st and 2nd hinge prep when butt hinges or at top channel when continuous hinge.
Positive pressure 90 minutes
Riveted

Located between 1st and 2nd hinge prep when butt hinges or at top channel when continuous hinge.
Positive pressure 60 minutes
Riveted

Located between 1st and 2nd hinge prep when butt hinges or at top channel when continuous hinge.
Positive pressure 45 minutes
Riveted

Located between 1st and 2nd hinge prep when butt hinges or at top channel when continuous hinge.
Positive pressure 20 minutes
Riveted

Located between 1st and 2nd hinge prep when butt hinges or at top channel when continuous hinge.
Located between 1st and 2nd hinge prep when butt hinges or at top channel when continuous hinge.
Windstorm Call 1 - 70psf/350 ft-lbs
Paper thin stick on label with protective film

Located between 1st and 2nd hinge prep when butt hinges or
at top channel when continuous hinge.
See page S-14 for specifications.
Hole for door viewer/peep hole

*manufacturer's template to be provided.
Prep for monorail cut out
per leaf

capping

x

y
Hot dipped galvannealed steel A60(ZF180)

Material per ASTM A653/A653M
a zinc-iron alloy by the Hot-Dipped process with a thicker coating than the A40.
0.60 oz/sq.ft total on both surfaces compared to 0.40 oz/sq.ft.
Giving the product a higher rust and corrosion resistance.
Also called as ZF180 in SI units.
Hot dipped galvanized steel G90(Z275)

- Material per ASTM A653/A653M
- a zinc coating by the Hot-Dipped process.
- 0.90 oz/sq.ft total on both surfaces.
- Recommended in damp or salty environment.
- Also called as Z275 in SI units.
- Doors(PA) and frames(KD) available unprimed only.
- Doors(CW) and frames(FW,CFW) with a temporary coating only at grinded areas.
3/4" undercut

bottom of door

bottom of frame/finish floor line
5/8" undercut

bottom of door

bottom of frame/finish floor line
1/8" undercut

bottom of door

1/8

top of sill/base
Special undercut

![Diagram of undercut]

- bottom of door
- bottom of frame/finish floor line
- varies
**10" x 10" exposed glass**
Actual glass size is 1" larger than exposed glass

**EXPOSED GLASS**

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>6' 8&quot;</td>
<td>66&quot;</td>
<td>12&quot;</td>
</tr>
<tr>
<td>6' 10&quot;</td>
<td>72&quot;</td>
<td>14&quot;</td>
</tr>
<tr>
<td>7' 0&quot;</td>
<td>84&quot;</td>
<td>16&quot;</td>
</tr>
<tr>
<td>7' 2&quot;</td>
<td>86&quot;</td>
<td>18&quot;</td>
</tr>
<tr>
<td>8' 0&quot;</td>
<td>96&quot;</td>
<td>28&quot;</td>
</tr>
</tbody>
</table>

**CUT OUT**

<table>
<thead>
<tr>
<th>Net Height</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>79 1/8&quot;</td>
<td>10 7/8&quot;</td>
</tr>
<tr>
<td>B</td>
<td>81 1/8&quot;</td>
<td>12 7/8&quot;</td>
</tr>
<tr>
<td>A</td>
<td>83 1/8&quot;</td>
<td>14 7/8&quot;</td>
</tr>
<tr>
<td>B</td>
<td>85 1/8&quot;</td>
<td>16 7/8&quot;</td>
</tr>
<tr>
<td>A</td>
<td>95 1/8&quot;</td>
<td>26 7/8&quot;</td>
</tr>
</tbody>
</table>

For 3/16" to 1" thick glass

This opening DOES NOT meet ADA standards
3" x 33" exposed glass
Actual glass size is 1" larger than exposed glass

EXPOSED GLASS

CUT OUT

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>6' 8&quot; (80&quot;)</td>
<td>6</td>
<td>7 5/8&quot;</td>
</tr>
<tr>
<td>6' 10&quot; (82&quot;)</td>
<td>6.5</td>
<td>9 5/8&quot;</td>
</tr>
<tr>
<td>7' 0&quot; (84&quot;)</td>
<td>7</td>
<td>11 5/8&quot;</td>
</tr>
<tr>
<td>7' 2&quot; (86&quot;)</td>
<td>7.5</td>
<td>13 5/8&quot;</td>
</tr>
<tr>
<td>8' 0&quot; (96&quot;)</td>
<td>8</td>
<td>23 5/8&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net Height</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>79 1/8&quot;</td>
<td>6 1/2&quot;</td>
</tr>
<tr>
<td>B</td>
<td>81 1/8&quot;</td>
<td>8 1/2&quot;</td>
</tr>
<tr>
<td>A</td>
<td>83 1/8&quot;</td>
<td>10 1/2&quot;</td>
</tr>
<tr>
<td>B</td>
<td>85 1/8&quot;</td>
<td>12 1/2&quot;</td>
</tr>
<tr>
<td>A</td>
<td>95 1/8&quot;</td>
<td>22 1/2&quot;</td>
</tr>
</tbody>
</table>

For 3/16" to 1" thick glass

varies
4" x 25" exposed glass
Actual glass size is 1" larger than exposed glass

EXPOSED GLASS

CUT OUT

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>6' 8&quot; (80&quot;)</td>
<td>7 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>6' 10&quot; (82&quot;)</td>
<td>9 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>7' 0&quot; (84&quot;)</td>
<td>11 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>7' 2&quot; (86&quot;)</td>
<td>13 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>8' 0&quot; (96&quot;)</td>
<td>23 5/8&quot;</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net Height</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>79 1/8&quot;</td>
<td>6 1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>81 1/8&quot;</td>
<td>8 1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>83 1/8&quot;</td>
<td>10 1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>85 1/8&quot;</td>
<td>12 1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>95 1/8&quot;</td>
<td>22 1/2&quot;</td>
<td></td>
</tr>
</tbody>
</table>

For 3/16" to 1" thick glass

This opening DOES NOT meet ADA standards
5" x 20" exposed glass
Actual glass size is 1" larger than exposed glass

EXPOSED GLASS

CUT OUT

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>6' 8&quot; (80&quot;)</td>
<td>7 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>6' 10&quot; (82&quot;)</td>
<td>9 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>7' 0&quot; (84&quot;)</td>
<td>11 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>7' 2&quot; (86&quot;)</td>
<td>13 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>8' 0&quot; (96&quot;)</td>
<td>23 5/8&quot;</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net Height</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>79 1/8&quot;</td>
<td>6 1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>81 1/8&quot;</td>
<td>8 1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>83 1/8&quot;</td>
<td>10 1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>85 1/8&quot;</td>
<td>12 1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>95 1/8&quot;</td>
<td>22 1/2&quot;</td>
<td></td>
</tr>
</tbody>
</table>

For 3/16" to 1" thick glass

This opening DOES NOT meet ADA standards
5" x 54" exposed glass
Actual glass size is 1" larger than exposed glass

**EXPOSED GLASS**

**CUT OUT**

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>6' 8&quot;</td>
<td>7</td>
<td>5/8&quot;</td>
</tr>
<tr>
<td>6' 10&quot;</td>
<td>9</td>
<td>5/8&quot;</td>
</tr>
<tr>
<td>7' 0&quot;</td>
<td>11</td>
<td>5/8&quot;</td>
</tr>
<tr>
<td>7' 2&quot;</td>
<td>13</td>
<td>5/8&quot;</td>
</tr>
<tr>
<td>8' 0&quot;</td>
<td>23</td>
<td>5/8&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net Height</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>79 1/8&quot;</td>
<td>6</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>81 1/8&quot;</td>
<td>8</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>83 1/8&quot;</td>
<td>10</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>85 1/8&quot;</td>
<td>12</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>95 1/8&quot;</td>
<td>22</td>
<td>1/2&quot;</td>
</tr>
</tbody>
</table>

For 3/16" to 1" thick glass
6" x 16" exposed glass
Actual glass size is 1" larger than exposed glass

EXPOSED GLASS

CUT OUT

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>Net Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>b</td>
</tr>
<tr>
<td>6' 8&quot;</td>
<td>7 5/8&quot;</td>
</tr>
<tr>
<td>6' 10&quot;</td>
<td>9 5/8&quot;</td>
</tr>
<tr>
<td>7' 0&quot;</td>
<td>11 5/8&quot;</td>
</tr>
<tr>
<td>7' 2&quot;</td>
<td>13 5/8&quot;</td>
</tr>
<tr>
<td>8' 0&quot;</td>
<td>23 5/8&quot;</td>
</tr>
</tbody>
</table>

For 3/16" to 1" thick glass

This opening DOES NOT meet ADA standards
6" x 30" exposed glass
Actual glass size is 1" larger than exposed glass

EXPOSED GLASS

CUT OUT

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>6' 8&quot; (80&quot;)</td>
<td>7 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>6' 10&quot; (82&quot;)</td>
<td>9 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>7' 0&quot; (84&quot;)</td>
<td>11 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>7' 2&quot; (86&quot;)</td>
<td>13 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>8' 0&quot; (96&quot;)</td>
<td>23 5/8&quot;</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net Height</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>79 1/8&quot;</td>
<td>6 1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>81 1/8&quot;</td>
<td>8 1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>83 1/8&quot;</td>
<td>10 1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>85 1/8&quot;</td>
<td>12 1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>95 1/8&quot;</td>
<td>22 1/2&quot;</td>
<td></td>
</tr>
</tbody>
</table>

For 3/16" to 1" thick glass
6" x 32" exposed glass
Actual glass size is 1" larger than exposed glass

EXPOSED GLASS

7"  6"

32"

CUT OUT

5/8"  8"

34"

Nominal Height

<table>
<thead>
<tr>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>6' 8&quot; (80&quot;)</td>
<td>7 5/8&quot;</td>
</tr>
<tr>
<td>6' 10&quot; (82&quot;)</td>
<td>9 5/8&quot;</td>
</tr>
<tr>
<td>7' 0&quot; (84&quot;)</td>
<td>11 5/8&quot;</td>
</tr>
<tr>
<td>7' 2&quot; (86&quot;)</td>
<td>13 5/8&quot;</td>
</tr>
<tr>
<td>8' 0&quot; (96&quot;)</td>
<td>23 5/8&quot;</td>
</tr>
</tbody>
</table>

Net Height

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>79 1/8&quot;</td>
<td>6 1/2&quot;</td>
</tr>
<tr>
<td>81 1/8&quot;</td>
<td>8 1/2&quot;</td>
</tr>
<tr>
<td>83 1/8&quot;</td>
<td>10 1/2&quot;</td>
</tr>
<tr>
<td>85 1/8&quot;</td>
<td>12 1/2&quot;</td>
</tr>
<tr>
<td>95 1/8&quot;</td>
<td>22 1/2&quot;</td>
</tr>
</tbody>
</table>

For 3/16" to 1" thick glass
6" x 36" exposed glass
Actual glass size is 1" larger than exposed glass

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>6' 8&quot; (80&quot;)</td>
<td>7 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>6' 10&quot; (82&quot;)</td>
<td>9 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>7' 0&quot; (84&quot;)</td>
<td>11 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>7' 2&quot; (86&quot;)</td>
<td>13 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>8' 0&quot; (96&quot;)</td>
<td>23 5/8&quot;</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net Height</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>79 1/8&quot;</td>
<td>6 1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>81 1/8&quot;</td>
<td>8 1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>83 1/8&quot;</td>
<td>10 1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>85 1/8&quot;</td>
<td>12 1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>95 1/8&quot;</td>
<td>22 1/2&quot;</td>
<td></td>
</tr>
</tbody>
</table>

For 3/16" to 1" thick glass
Half glass
Actual glass size is 1" larger than exposed glass

**EXPOSED GLASS**

<table>
<thead>
<tr>
<th>Nominal Width</th>
<th>c</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>2’ 6” (30”)</td>
<td>16”</td>
<td></td>
</tr>
<tr>
<td>2’ 10” (34”)</td>
<td>20”</td>
<td></td>
</tr>
<tr>
<td>3’ 0” (36”)</td>
<td>22”</td>
<td></td>
</tr>
<tr>
<td>3’ 6” (42”)</td>
<td>28”</td>
<td></td>
</tr>
<tr>
<td>4’ 0” (48”)</td>
<td>34”</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>6’ 8” (80”)</td>
<td>26”</td>
<td></td>
</tr>
<tr>
<td>6’ 10” (82”)</td>
<td>28”</td>
<td></td>
</tr>
<tr>
<td>7’ 0” (84”)</td>
<td>30”</td>
<td></td>
</tr>
<tr>
<td>7’ 2” (86”)</td>
<td>32”</td>
<td></td>
</tr>
<tr>
<td>8’ 0” (96”)</td>
<td>42”</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net Width</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>29 3/4”</td>
<td>18”</td>
<td></td>
</tr>
<tr>
<td>33 3/4”</td>
<td>22”</td>
<td></td>
</tr>
<tr>
<td>35 3/4”</td>
<td>24”</td>
<td></td>
</tr>
<tr>
<td>41 3/4”</td>
<td>30”</td>
<td></td>
</tr>
<tr>
<td>47 3/4”</td>
<td>36”</td>
<td></td>
</tr>
</tbody>
</table>

For 3/16” to 1” thick glass

This opening to allow proper clearances for hardware, DOES NOT meet ADA standards
Two half glass
Actual glass size is 1" larger than exposed glass

EXPOSED GLASS

CUT OUT

<table>
<thead>
<tr>
<th>Nominal Width</th>
<th>c</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>2' 6&quot; (30&quot;)</td>
<td>16&quot;</td>
<td></td>
</tr>
<tr>
<td>2' 10&quot; (34&quot;)</td>
<td>20&quot;</td>
<td></td>
</tr>
<tr>
<td>3' 0&quot; (36&quot;)</td>
<td>22&quot;</td>
<td></td>
</tr>
<tr>
<td>3' 6&quot; (42&quot;)</td>
<td>28&quot;</td>
<td></td>
</tr>
<tr>
<td>4' 0&quot; (48&quot;)</td>
<td>34&quot;</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>6' 8&quot; (80&quot;)</td>
<td>26&quot;</td>
<td></td>
</tr>
<tr>
<td>6' 10&quot; (82&quot;)</td>
<td>28&quot;</td>
<td></td>
</tr>
<tr>
<td>7' 0&quot; (84&quot;)</td>
<td>30&quot;</td>
<td></td>
</tr>
<tr>
<td>7' 2&quot; (86&quot;)</td>
<td>32&quot;</td>
<td></td>
</tr>
<tr>
<td>8' 0&quot; (96&quot;)</td>
<td>42&quot;</td>
<td></td>
</tr>
</tbody>
</table>

Net Width

<table>
<thead>
<tr>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>18&quot;</td>
</tr>
<tr>
<td>33</td>
<td>22&quot;</td>
</tr>
<tr>
<td>35</td>
<td>24&quot;</td>
</tr>
<tr>
<td>41</td>
<td>30&quot;</td>
</tr>
<tr>
<td>47</td>
<td>36&quot;</td>
</tr>
</tbody>
</table>

Net Height

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>79</td>
<td>28&quot;</td>
</tr>
<tr>
<td>81</td>
<td>30&quot;</td>
</tr>
<tr>
<td>83</td>
<td>32&quot;</td>
</tr>
<tr>
<td>85</td>
<td>34&quot;</td>
</tr>
<tr>
<td>95</td>
<td>44&quot;</td>
</tr>
</tbody>
</table>

For 3/16" to 1" thick glass
Full glass
Actual glass size is 1" larger than exposed glass

<table>
<thead>
<tr>
<th>Nominal Width</th>
<th>c</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>2' 6&quot; (30&quot;)</td>
<td>16&quot;</td>
<td></td>
</tr>
<tr>
<td>2' 10&quot; (34&quot;)</td>
<td>20&quot;</td>
<td></td>
</tr>
<tr>
<td>3' 0&quot; (36&quot;)</td>
<td>22&quot;</td>
<td></td>
</tr>
<tr>
<td>3' 6&quot; (42&quot;)</td>
<td>28&quot;</td>
<td></td>
</tr>
<tr>
<td>4' 0&quot; (48&quot;)</td>
<td>34&quot;</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>6' 8&quot; (80&quot;)</td>
<td>58&quot;</td>
<td></td>
</tr>
<tr>
<td>6' 10&quot; (82&quot;)</td>
<td>60&quot;</td>
<td></td>
</tr>
<tr>
<td>7' 0&quot; (84&quot;)</td>
<td>62&quot;</td>
<td></td>
</tr>
<tr>
<td>7' 2&quot; (86&quot;)</td>
<td>64&quot;</td>
<td></td>
</tr>
<tr>
<td>8' 0&quot; (96&quot;)</td>
<td>74&quot;</td>
<td></td>
</tr>
</tbody>
</table>

For 3/16" to 1" thick glass

<table>
<thead>
<tr>
<th>Net Width</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>29 3/4&quot;</td>
<td>18&quot;</td>
<td></td>
</tr>
<tr>
<td>33 3/4&quot;</td>
<td>22&quot;</td>
<td></td>
</tr>
<tr>
<td>35 3/4&quot;</td>
<td>24&quot;</td>
<td></td>
</tr>
<tr>
<td>41 3/4&quot;</td>
<td>30&quot;</td>
<td></td>
</tr>
<tr>
<td>47 3/4&quot;</td>
<td>36&quot;</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net Height</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>79 1/8&quot;</td>
<td>60&quot;</td>
<td></td>
</tr>
<tr>
<td>81 1/8&quot;</td>
<td>62&quot;</td>
<td></td>
</tr>
<tr>
<td>83 1/8&quot;</td>
<td>64&quot;</td>
<td></td>
</tr>
<tr>
<td>85 1/8&quot;</td>
<td>66&quot;</td>
<td></td>
</tr>
<tr>
<td>95 1/8&quot;</td>
<td>76&quot;</td>
<td></td>
</tr>
</tbody>
</table>
Including channel
May be mandatory with some lite sizes and/or options

$\frac{1}{2} \pm \frac{1}{8}$
Without channel
Not available with some lite sizes and/or options
10” x 10” exposed
Actual glass size is 1” larger than exposed glass

EXPOSED GLASS

Outside view

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>6’ 8” (80”)</td>
<td>12”</td>
<td></td>
</tr>
<tr>
<td>6’ 10” (82”)</td>
<td>14”</td>
<td></td>
</tr>
<tr>
<td>7’ 0” (84”)</td>
<td>16”</td>
<td></td>
</tr>
<tr>
<td>7’ 2” (86”)</td>
<td>18”</td>
<td></td>
</tr>
<tr>
<td>8’ 0” (96”)</td>
<td>28”</td>
<td></td>
</tr>
</tbody>
</table>

For 3/16” to 1” thick glass

This opening DOES NOT meet ADA standards
5" x 20" exposed
Actual glass size is 1" larger than exposed glass

EXPOSED GLASS

Outside view

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>6' 8&quot; (80'')</td>
<td>7 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>6' 10&quot; (82'')</td>
<td>9 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>7' 0&quot; (84'')</td>
<td>11 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>7' 2&quot; (86'')</td>
<td>13 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>8' 0&quot; (96'')</td>
<td>23 5/8&quot;</td>
<td></td>
</tr>
</tbody>
</table>

For 3/16" to 1" thick glass

spot welded

This opening DOES NOT meet ADA standards
5" x 54" exposed
Actual glass size is 1" larger than exposed glass

EXPOSED GLASS

Outside view

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>6' 8&quot; (80&quot;)</td>
<td>7 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>6' 10&quot; (82&quot;)</td>
<td>9 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>7' 0&quot; (84&quot;)</td>
<td>11 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>7' 2&quot; (86&quot;)</td>
<td>13 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>8' 0&quot; (96&quot;)</td>
<td>23 5/8&quot;</td>
<td></td>
</tr>
</tbody>
</table>

For 3/16" to 1" thick glass

spot welded

spot welded
6" x 16" exposed
Actual glass size is 1" larger than exposed glass

Outside view

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>6’ 8” (80”)</td>
<td>7 5/8”</td>
<td></td>
</tr>
<tr>
<td>6’ 10” (82”)</td>
<td>9 5/8”</td>
<td></td>
</tr>
<tr>
<td>7’ 0” (84”)</td>
<td>11 5/8”</td>
<td></td>
</tr>
<tr>
<td>7’ 2” (86”)</td>
<td>13 5/8”</td>
<td></td>
</tr>
<tr>
<td>8’ 0” (96”)</td>
<td>23 5/8”</td>
<td></td>
</tr>
</tbody>
</table>

For 3/16” to 1” thick glass

This opening DOES NOT meet ADA standards
**6" x 36" exposed**
Actual glass size is 1" larger than exposed glass

Outside view

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>6’ 8” (80”)</td>
<td>7 5/8”</td>
<td></td>
</tr>
<tr>
<td>6’ 10” (82”)</td>
<td>9 5/8”</td>
<td></td>
</tr>
<tr>
<td>7’ 0” (84”)</td>
<td>11 5/8”</td>
<td></td>
</tr>
<tr>
<td>7’ 2” (86”)</td>
<td>13 5/8”</td>
<td></td>
</tr>
<tr>
<td>8’ 0” (96”)</td>
<td>23 5/8”</td>
<td></td>
</tr>
</tbody>
</table>

For 3/16” to 1” thick glass

Spot welded

Spot welded
Half glass
Actual glass size is 1" larger than exposed glass

EXPOSED GLASS

Outside view

<table>
<thead>
<tr>
<th>Nominal Width</th>
<th>c</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>2’ 6” (30”)</td>
<td></td>
<td>16”</td>
</tr>
<tr>
<td>2’ 10” (34”)</td>
<td></td>
<td>20”</td>
</tr>
<tr>
<td>3’ 0” (36”)</td>
<td></td>
<td>22”</td>
</tr>
<tr>
<td>3’ 6” (42”)</td>
<td></td>
<td>28”</td>
</tr>
<tr>
<td>4’ 0” (48”)</td>
<td></td>
<td>34”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>6’ 8” (80”)</td>
<td></td>
<td>26”</td>
</tr>
<tr>
<td>6’ 10” (82”)</td>
<td></td>
<td>28”</td>
</tr>
<tr>
<td>7’ 0” (84”)</td>
<td></td>
<td>30”</td>
</tr>
<tr>
<td>7’ 2” (86”)</td>
<td></td>
<td>32”</td>
</tr>
<tr>
<td>8’ 0” (96”)</td>
<td></td>
<td>42”</td>
</tr>
</tbody>
</table>

For 3/16” to 1” thick glass

This opening to allow proper clearances for hardware, DOES NOT meet ADA standards
Two half glass
Actual glass size is 1" larger than exposed glass

**EXPOSED GLASS**

<table>
<thead>
<tr>
<th>Nominal Width</th>
<th>Nominal Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>c</td>
<td>a</td>
</tr>
<tr>
<td>2’ 6” (30”)</td>
<td>6’ 8” (80”)</td>
</tr>
<tr>
<td>2’ 10” (34”)</td>
<td>6’ 10” (82”)</td>
</tr>
<tr>
<td>3’ 0” (36”)</td>
<td>7’ 0” (84”)</td>
</tr>
<tr>
<td>3’ 6” (42”)</td>
<td>7’ 2” (86”)</td>
</tr>
<tr>
<td>4’ 0” (48”)</td>
<td>8’ 0” (96”)</td>
</tr>
<tr>
<td>d</td>
<td>b</td>
</tr>
<tr>
<td>16”</td>
<td>26”</td>
</tr>
<tr>
<td>20”</td>
<td>28”</td>
</tr>
<tr>
<td>22”</td>
<td>30”</td>
</tr>
<tr>
<td>28”</td>
<td>32”</td>
</tr>
<tr>
<td>34”</td>
<td>42”</td>
</tr>
</tbody>
</table>

For 3/16” to 1” thick glass

spot welded

spot welded

FK
**Full glass**

Actual glass size is 1" larger than exposed glass

**EXPOSED GLASS**

Outside view

<table>
<thead>
<tr>
<th>Nominal Width</th>
<th></th>
<th>Nominal Height</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>c</td>
<td>d</td>
<td>a</td>
<td>b</td>
</tr>
<tr>
<td>2' 6&quot; (30&quot;)</td>
<td>16&quot;</td>
<td>6' 8&quot; (80&quot;)</td>
<td>58&quot;</td>
</tr>
<tr>
<td>2' 10&quot; (34&quot;)</td>
<td>20&quot;</td>
<td>6' 10&quot; (82&quot;)</td>
<td>60&quot;</td>
</tr>
<tr>
<td>3' 0&quot; (36&quot;)</td>
<td>22&quot;</td>
<td>7' 0&quot; (84&quot;)</td>
<td>62&quot;</td>
</tr>
<tr>
<td>3' 6&quot; (42&quot;)</td>
<td>28&quot;</td>
<td>7' 2&quot; (86&quot;)</td>
<td>64&quot;</td>
</tr>
<tr>
<td>4' 0&quot; (48&quot;)</td>
<td>34&quot;</td>
<td>8' 0&quot; (96&quot;)</td>
<td>74&quot;</td>
</tr>
</tbody>
</table>

For 3/16" to 1" thick glass

spot welded

spot welded
**10" x 10" exposed**
Actual glass size is 1" larger than exposed glass

---

**EXPOSED GLASS**

---

**Outside view**

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>6’ 8” (80”)</td>
<td>12”</td>
</tr>
<tr>
<td>6’ 10” (82”)</td>
<td>14”</td>
</tr>
<tr>
<td>7’ 0” (84”)</td>
<td>16”</td>
</tr>
<tr>
<td>7’ 2” (86”)</td>
<td>18”</td>
</tr>
<tr>
<td>8’ 0” (96”)</td>
<td>28”</td>
</tr>
</tbody>
</table>

*up to 7/16” thick glass, min. 1 3/4” door

*For 1/2” to 1” thick glass

---

*The manufacturing process of these lite kits (tack welding, putty filled) may results in a show-through after application of a finished paint. These characteristics are inherent in production and are not to be considered as manufacturing defects.

Per ANSI A250.8–2003(R2008), previously ANSI SDI 100–91 Appendix A.

---

This opening DOES NOT meet ADA standards
5" x 20" exposed
Actual glass size is 1" larger than exposed glass

**outside view**

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>6' 8&quot; (80&quot;)</td>
<td>7 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>6' 10&quot; (82&quot;)</td>
<td>9 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>7' 0&quot; (84&quot;)</td>
<td>11 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>7' 2&quot; (86&quot;)</td>
<td>13 5/8&quot;</td>
<td></td>
</tr>
<tr>
<td>8' 0&quot; (96&quot;)</td>
<td>23 5/8&quot;</td>
<td></td>
</tr>
</tbody>
</table>

*up to 7/16" thick glass, min. 1 3/4" door

*For 1/2" to 1" thick glass

*The manufacturing process of these lite kits (tack welding, putty filled) may result in a show-through after application of a finished paint. These characteristics are inherent in production and are not to be considered as manufacturing defects.

Per ANSI A250.8–2003(R2008), previously ANSI SDI 100–91 Appendix A.

This opening DOES NOT meet ADA standards
**5" x 54" exposed**
Actual glass size is 1" larger than exposed glass

**EXPOSED GLASS**

![Diagram of exposed glass dimensions]

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>Outside View</th>
</tr>
</thead>
<tbody>
<tr>
<td>6' 8&quot; (80&quot;)</td>
<td>7' 5/8&quot;</td>
</tr>
<tr>
<td>6' 10&quot; (82&quot;)</td>
<td>9' 5/8&quot;</td>
</tr>
<tr>
<td>7' 0&quot; (84&quot;)</td>
<td>11' 5/8&quot;</td>
</tr>
<tr>
<td>7' 2&quot; (86&quot;)</td>
<td>13' 5/8&quot;</td>
</tr>
<tr>
<td>8' 0&quot; (96&quot;)</td>
<td>23' 5/8&quot;</td>
</tr>
</tbody>
</table>

*up to 7/16" thick glass, min. 1 3/4" door  
*For 1/2" to 1" thick glass

*The manufacturing process of these lite kits (tack welding, putty filled) may results in a show-through after application of a finished paint. These characteristics are inherent in production and are not to be considered as manufacturing defects.

Per ANSI A250.8-2003(R2008), previously ANSI SDI 100-91 Appendix A.
6" x 16" exposed
Actual glass size is 1" larger than exposed glass

**EXPOSED GLASS**

Outside view

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>6’ 8” (80”)</td>
<td>7 5/8”</td>
</tr>
<tr>
<td>6’ 10” (82”)</td>
<td>9 5/8”</td>
</tr>
<tr>
<td>7’ 0” (84”)</td>
<td>11 5/8”</td>
</tr>
<tr>
<td>7’ 2” (86”)</td>
<td>13 5/8”</td>
</tr>
<tr>
<td>8’ 0” (96”)</td>
<td>23 5/8”</td>
</tr>
</tbody>
</table>

*up to 7/16” thick glass, min. 1 3/4” door
*For 1/2” to 1” thick glass

*The manufacturing process of these lite kits (tack welding, putty filled) may result in a show-through after application of a finished paint. These characteristics are inherent in production and are not to be considered as manufacturing defects.
Per ANSI A250.8-2003(R2008), previously ANSI SDI 100-91 Appendix A.

This opening DOES NOT meet ADA standards
6" x 36" exposed
Actual glass size is 1" larger than exposed glass

**EXPOSED GLASS**

Outside view

<table>
<thead>
<tr>
<th>Nominal Height</th>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>6’ 8” (80”)</td>
<td>7 5/8”</td>
<td></td>
</tr>
<tr>
<td>6’ 10” (82”)</td>
<td>9 5/8”</td>
<td></td>
</tr>
<tr>
<td>7’ 0” (84”)</td>
<td>11 5/8”</td>
<td></td>
</tr>
<tr>
<td>7’ 2” (86”)</td>
<td>13 5/8”</td>
<td></td>
</tr>
<tr>
<td>8’ 0” (96”)</td>
<td>23 5/8”</td>
<td></td>
</tr>
</tbody>
</table>

*up to 7/16” thick glass, min. 1 3/4” door

*For 1/2” to 1” thick glass

*The manufacturing process of these lite kits (tack welding, putty filled) may result in a show-through after application of a finished paint. These characteristics are inherent in production and are not to be considered as manufacturing defects.

Per ANSI A250.8–2003(R2008), previously ANSI SDI 100–91 Appendix A.
**Half glass**
Actual glass size is 1" larger than exposed glass

**EXPOSED GLASS**

```
<table>
<thead>
<tr>
<th>Outside view</th>
<th>Nominal Width</th>
<th>Nominal Height</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>c (d)</td>
<td>a (b)</td>
</tr>
<tr>
<td>2' 6&quot; (30&quot;)</td>
<td>16&quot;</td>
<td>6' 8&quot; (80&quot;)</td>
</tr>
<tr>
<td>2' 10&quot; (34&quot;)</td>
<td>20&quot;</td>
<td>6' 10&quot; (82&quot;)</td>
</tr>
<tr>
<td>3' 0&quot; (36&quot;)</td>
<td>22&quot;</td>
<td>7' 0&quot; (84&quot;)</td>
</tr>
<tr>
<td>3' 6&quot; (42&quot;)</td>
<td>28&quot;</td>
<td>7' 2&quot; (86&quot;)</td>
</tr>
<tr>
<td>4' 0&quot; (48&quot;)</td>
<td>34&quot;</td>
<td>8' 0&quot; (96&quot;)</td>
</tr>
</tbody>
</table>
```

*up to 7/16" thick glass, min. 1 3/4" door

*For 1/2" to 1" thick glass

*The manufacturing process of these lite kits (tack welding, putty filled) may results in a show-through after application of a finished paint. These characteristics are inherent in production and are not to be considered as manufacturing defects.

Per ANSI A250.8–2003(R2008), previously ANSI SDI 100–91 Appendix A.

This opening to allow proper clearances for hardware, DOES NOT meet ADA standards
**Two half glass**

Actual glass size is 1" larger than exposed glass

![Diagram of EXPOSED GLASS]

<table>
<thead>
<tr>
<th>Outside view</th>
<th>Nominal Width</th>
<th>Nominal Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>c</td>
<td>d</td>
<td>a</td>
</tr>
<tr>
<td>2’ 6” (30”)</td>
<td>16”</td>
<td>6’ 8” (80”)</td>
</tr>
<tr>
<td>2’ 10” (34”)</td>
<td>20”</td>
<td>6’ 10” (82”)</td>
</tr>
<tr>
<td>3’ 0” (36”)</td>
<td>22”</td>
<td>7’ 0” (84”)</td>
</tr>
<tr>
<td>3’ 6” (42”)</td>
<td>28”</td>
<td>7’ 2” (86”)</td>
</tr>
<tr>
<td>4’ 0” (48”)</td>
<td>34”</td>
<td>8’ 0” (96”)</td>
</tr>
</tbody>
</table>

*up to 7/16” thick glass, min. 1 3/4” door  

*For 1/2” to 1” thick glass

*The manufacturing process of these lite kits (tack welding, putty filled) may result in a show-through after application of a finished paint. These characteristics are inherent in production and are not to be considered as manufacturing defects.

Per ANSI A250.8–2003(R2008), previously ANSI SDI 100–91 Appendix A.
**Full glass**

Actual glass size is 1" larger than exposed glass

**EXPOSED GLASS**

<table>
<thead>
<tr>
<th>Outside view</th>
<th>Nominal Width</th>
<th>Nominal Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>c</td>
<td>d</td>
<td>a</td>
</tr>
<tr>
<td>2' 6&quot; (30&quot;)</td>
<td>16&quot;</td>
<td>6' 8&quot; (80&quot;)</td>
</tr>
<tr>
<td>2' 10&quot; (34&quot;)</td>
<td>20&quot;</td>
<td>6' 10&quot; (82&quot;)</td>
</tr>
<tr>
<td>3' 0&quot; (36&quot;)</td>
<td>22&quot;</td>
<td>7' 0&quot; (84&quot;)</td>
</tr>
<tr>
<td>3' 6&quot; (42&quot;)</td>
<td>28&quot;</td>
<td>7' 2&quot; (86&quot;)</td>
</tr>
<tr>
<td>4' 0&quot; (48&quot;)</td>
<td>34&quot;</td>
<td>8' 0&quot; (96&quot;)</td>
</tr>
</tbody>
</table>

*up to 7/16" thick glass, min. 1 3/4" door  
*For 1/2" to 1" thick glass

*The manufacturing process of these lite kits (tack welding, putty filled) may results in a show-through after application of a finished paint. These characteristics are inherent in production and are not to be considered as manufacturing defects.*

Per ANSI A250.8–2003(R2008), previously ANSI SDI 100–91 Appendix A.
Sandwich kit (N Series) with muntins
Add to SK vision kit, for up to 1/2" thick glass.
18" x 18" louver, sandwich type
Not rated. Available with or without channel

LOUVER SIZES

CUT OUT

Per ADA standards, 10" from floor to casing.
Louvers made by others from cold rolled steel, available in galvannealed.
18" x 12" louver, sandwich type
Not rated. Available with or without channel

LOUVER SIZES

CUT OUT

Per ADA standards, 10" from floor to casing.
Louveres made by others from cold rolled steel, available in galvannealed.
12" x 12" louver, sandwich type
Not rated. Available with or without channel

LOUVER SIZES

CUT OUT

Per ADA standards, 10" from floor to casing.
Louvres made by others from cold rolled steel, available in galvannealed.
24" x 12" louver, sandwich type
Not rated. Available with or without channel

Per ADA standards, 10" from floor to casing.
Louvers made by others from cold rolled steel, available in galvannealed.
24” x 18” louver, sandwich type
Not rated. Available with or without channel

Per ADA standards, 10” from floor to casing.
Louver made by others from cold rolled steel, available in galvannealed.
24” x 24” louver, sandwich type
Not rated. Available with or without channel

LOUVER SIZES

CUT OUT

Per ADA standards, 10” from floor to casing.
Louvers made by others from cold rolled steel, available in galvannealed.
Round cut out
perimeter channel not available
4 1/2" standard weight hinge reinforcement (0.134), 7ga
Projection welded

mortar guard at frame with masonry anchors
4 1/2" heavy weight hinge reinforcement (0.180), 7ga
Projection welded
4 1/2" convertible hinge reinforcement (0.134/0.180), 7ga
Projection welded

mortar guard at frame with masonry anchors
5" standard weight hinge reinforcement (0.146), 7ga
Projection welded

mortar guard at frame with masonry ahors
5" heavy weight hinge reinforcement (0.190), 7ga
Projection welded

mortar guard at frame with masonry anchors
3 1/2" standard weight hinge reinforcement (0.125), 10ga
Projection welded

Shown for a 1 3/8" thick door
4" standard weight hinge reinforcement (0.130), 10ga
Projection welded
4 1/2" institutional hinge reinforcement (0.180), 7ga
Projection welded

mortar guard at frame with masonry anchors
6" standard weight hinge reinforcement (0.160), 7ga
Projection welded
6" heavy weight hinge reinforcement (0.203), 7ga
Projection welded
Anchor hinge, 10ga
Projection welded

*manufacturers template to be provided
Mortar guard

Added at all frames with masonry anchors
Model for 4 1/2" butt hinge reinforcement shown.
Special mortise hinge, 7ga
Projection welded

*manufacturer's template to be provided
Electric hinge reinforcement, 7ga
Projection welded

4 1/2" electric hinge prep. shown, also available for other heights.
* fits most of electric hinges, please verify toward model intended.
Box for electric prep with knockouts, 16ga
Spot welded
Electric power transfer reinforcements, 12ga
Projection welded

*manufacturer's template to be provided
Box for power transfer with knockouts
Spot welded

16"

22ga

∅ 1,5

∅ 3,0
Prep. for electric strike, 12ga
Spot and/or tack welded

for locks

for rim devices

*availability per soffit's width

*manufacturer's template to be provided
Box for electric strike with knockouts
Spot welded
Prep. for magnetic contact, hole only at head

*manufacturer's template to be provided
Box for magnetic contat with knockouts
Spot welded
Prep. for magnetic contact, hole only at jamb

*manufacturer's template to be provided
Prep. for magnetic contact with reinforcement, 12ga, at head

*manufacturer's template to be provided
Prep. for magnetic contact with reinforcement, 12ga, at jamb

*manufacturer's template to be provided
Shearlock head reinforcement

Surface type

Concealed type

*manufacturer's template to be provided
Raceway for electric hardware

1" hole in head

EH/EPT

1" hole in jamb

EH/EPT
Prep. for electromagnetic lock reinforcement, 12ga
Concealed leaf continuous hinge reinforcement, 14ga
Projection welded

Reinforcement notched for anchors
Concealed leaf continuous electric hinge reinforcement, 14ga
Projection welded

*manufacturer’s template to be provided
Surface continuous hinge reinforcement, 14ga
Spot welded, 10" C/C
Reinforcement for double acting hinge, 12ga
Spot welded

At cased open frame only.
Prep. for "Eliason" pivot, 12ga
Spot welded
Invisible hinge reinforcement, 12ga
Spot welded

*manufacturer's template to be provided
Prep. for top pivot, 10ga
Spot welded

center hung

offset hung

*manufacturer's template to be provided
Prep. for intermediate pivot, 7ga
Spot welded

*manufacturer's template to be provided
Prep. for bottom pivot on floor

center hung

offset hung
Prep. for bottom pivot in jamb, 10ga
Spot welded

center hung

offset hung

*manufacturer's template to be provided
Reinforcement for surface corner pivot, 12ga
Projection welded

2" ± 1/16"  14" ± 1/16"

Head

Hinge jamb
Pocket pivot reinforcements, 10ga
Spot welded

26ga dust box

minimum 2" face

varies

varies

varies

26ga dust box

at special double egress profile

*manufacturer's template to be provided
Standard ANSI 4 7/8" strike reinforcement, 16ga
Projection welded

Tapped extruded holes as much threads as is if a 12ga reinforcement
Standard ANSI 4 7/8" strike reinforcement, 12ga
Projection welded
Standard ANSI 4 7/8" strike reinforcement, 10ga
Projection welded
Standard ANSI 4 7/8" strike reinforcement, 7ga
Projection welded
Standard 2 3/4" strike reinforcement, 16ga
Projection welded

Tapped extruded holes as much threads as if a 12ga reinforcement
Cylindrical deadlock strike reinforcement, 16ga
Projection welded

Tapped extruded holes as much threads as if a 12ga reinforcement
Cylindrical deadlock strike reinforcement, 12ga
Projection welded

Dimensions:
- 3/8" x 1 1/8" x 7 1/16"
3 1/2" mortise deadlock strike reinforcement, 16ga
Projection welded

Tapped extruded holes as much threads as is if a 12ga reinforcement
Standard ANSI 4 7/8" deadlock strike reinforcement, 16ga
Projection welded

Tapped extruded holes as much threads as is if a 12ga reinforcement
Interconnected lock strike 4" C/C (T + DL234)
Projection welded

Tapped extruded holes as much threads as is if a 12ga reinforcement
Interconnected lock strike 5 1/2" C/C (T + DL234)
Projection welded

Tapped extruded holes as much threads as is if a 12ga reinforcement
Prep. for double lipped strike reinforcement, 12ga
Projection welded

*manufacturer's template to be provided
Prep. for emergency stop release reinforcement, 12ga
Spot welded

*manufacturer's template to be provided
Roller latch strike reinforcement at head, 12ga
Spot welded

*manufacturer's template to be provided
Roller latch strike reinforcement at jamb, 12ga
Spot welded

*manufacturer's template to be provided
**Special strike reinforcement, 12ga**

Spot welded

*manufacturer's template to be provided*
Prep for surface vertical rod strike, 12ga
Projection welded
Prep for concealed vertical rod strike, 12ga
Spot welded

*manufacturer's template to be provided
Ansí A156-16 flush bolt strike reinforcement, 18ga

Spot welded

Tapped extruded holes as much threads as is if a 12ga reinforcement
Reversible flush bolt strike reinforcement, 18ga
Projection welded

Tapped extruded holes as much threads as is if a 12ga reinforcement
Surface bolt strike reinforcement, 12ga
Projection welded
Self latching flush bolt strike reinforcement, 18ga
Projection welded

Tapped extruded holes as much threads as is if a 12ga reinforcement
Regular arm closer reinforcement, 12ga
Projection welded
Parallel arm closer reinforcement, 12ga
Projection welded

12ga

14” ± 1/8”

4” ± 1/4”

hinge jamb
Regular and parallel arm closer reinforcement, 12ga
Projection welded
Top jamb closer reinforcement, 12ga
Projection welded

14" ± 1/8" x 4" ± 1/4"

1/16" 12ga hinge jamb
Full width regular arm closer reinforcement, 12ga
Projection welded
Full width parallel arm closer reinforcement, 12ga
Projection welded
Full width regular and parallel arm closer reinforcement, 12ga
Projection welded
Full width top jamb closer reinforcement, 12ga
Projection welded
Concealed closer, 12ga
Spot welded

*holiday side
 varies

*manufacturer's template to be provided
Prep. for concealed overhead stop, 12ga
Spot welded

*manufacturer's template to be provided
Prep. for surface overhead stop, 12ga
Projection welded

14" ± 1/8"
4" ± 1/4"

12ga
hinge jamb
Full sleeve closer reinforcement, 12ga
Projection welded

14” ± 1/8”

4” ± 1/4”

12ga

hinge jamb
Full width full sleeve closer reinforcement, 12ga
Projection welded
Face mounted coordinator reinforcement, 12ga
Projection welded

centerline of pair

14" ± 1/8"
Soffit mounted coordinator reinforcement, 12ga
Projection welded
Screw base anchor

SR series

DW series

Fasteners by others, use #6 drywall screws.
Drywall strap anchor, 18ga
Spot welded

\[ \frac{1}{2}'' \]

\[ 2'' \]

\[ 2\frac{1}{4}'' \]

\[ 1\frac{1}{4}'' \]

*at 1/2" from returns if requested on pre-drywall frame
Snap in anchor for drywall partition, 16ga
Shipped loose

DW/DR series and 2" face only.
Must order 2 pieces for a full anchor
Compression anchor, 18/20ga
Spot welded

By default at knock down frames.
Additional CPA at head when 4" face and/or LR series.
2 of in width from 8"JD and up.
Wood trim prep
Less return frame only

wood trim by other

1/2" holes

12" max.
"Z" bracket anchor for double layer of drywall
Spot welded

1-3/8" minimum
18ga min.
Snap in for wood and steel stud
Shipped loose

Snap together for assembly

Combination wood and steel stud anchor
Spot welded

18ga min,

11/16" minimum

2 1/8"
"T" masonry anchor, 16ga
Shipped loose

From 4 3/4" to 8 3/4" JD

SR16 5 3/4"-4 7/8" frames

Available for DR series.
Wire masonry anchor
Shipped loose

Dimensions:
- 2 5/8" min.
- 14" max.
- 10 3/8"

Material: 7 ga
Existing wall anchor
Spot welded

Dynabolts are optional see option DYN4 and DYN5.
Existing wall anchor for 1/4" screw
Spot welded

1/4" wood screws by others.
Existing wall anchor for 1/4" screw without reinforcement

1/4" wood screws by others.
Existing wall anchor without reinforcement

Dynabolts are optional see option DYN4 and DYN5.
Existing wall anchor with plug

Spot welded

SPAENEAUR #B-1745-PS

1\(\frac{1}{2}\)" minimum

2 sets of anchors for 10 3/4" JD and up.
Dynabolts are optional see option DYN4 and DYN5.
Existing wall anchor for 1/4" screw with plug
Spot welded

SPAENAUR #B-1745-PS

1 1/2" minimum

2 sets of anchors for 10 3/4" JD and up.
1/4" wood screws by others.
Existing wall anchor with tube
Tack welded

2 sets of anchors for 10 3/4" JD and up.
Dynabolts are optional see option DYN4 and DYN5.
Existing wall anchor for 1/4" screw with tube
Tack welded

2 sets of anchors for 10 3/4" JD and up.
1/4" wood screws by others.
Adjustable "T" anchor
Spot welded

18ga min.
Metal builder anchor

tack welded

Available for SR series only
4\" long dynabolt for existing wall

ship loose

Not by default when ordering EWA, EWANOR, EWAP & EWAT.
5" long dynabolt for existing wall
ship loose

Not by default when ordering EWA, EWANOR, EWAP & EWAT.
Floor anchor
Spot welded

One part model
up to 5 7/8" JD

Two parts model
6" JD and up
Inverted floor anchor
Spot welded

One part model
up to 5 3/8" JD

Two parts model
5 1/2"JD and up
Adjustable floor anchor, 16/12ga
Spot welded

14-20 x 12
PH mech. screws

1 3/8" max
Additional split frame anchor, 16ga
Knocked down corner with tabs
Corner detail with compression anchor at jamb,
**Knocked down intersection**
Corner detail with compression anchor at jambs.

Inverted base anchors
Knocked down corner with screws
Corner detail with compression anchor at jamb,

- Sheet metal screws
  - #8-15 x 1” Phillips Truss Head SS

- Tab 16ga
Face welded corner

Face welded and finished smooth

Typical detail
**Full depth continuous welded corner**

Continuous welded on inside.

Continuously welded at faces from exterior, and finished smooth.

Typical detail.
Face welded intersection

Face welded and finished smooth.

Face welded and finished smooth.
Non standard welded corner
At all corners other than 90°
Sanitary weld

welded through from outside

1/4r
Welded by others (KD w/o tabs)
Mechanical field splice for oversized units
Includes #12-24 mechanical screws
Splice for oversized units

Over 9'8" in width and 9'10" in height, when no adjacent mullion.
Removable mullion/transom bar
Includes #12-24 mechanical screws
Removable mullion with floor anchor
Includes #12-24 mechanical screws
Splice for field welding of oversized units
Grey Waterborne Primer

General Properties
A quick drying water-based primer designed for application to galvannealed surfaces. This product has excellent adhesion and corrosion resistance properties and is compatible with a wide variety of architectural topcoat paints. This primer can be topcoated immediately, or at any time in the future. Note that per NAAMM/HMMA 840 it is recommended to apply the finish coat of paint within 30 days of delivery. This product contains low VOC’s and is engineered to surpass ANSI A250.10 Specifications when applied to galvannealed substrates.

Product Information
Generic type: Acrylic resins
Mix ratio: Single component
Pigment type: Anti-corrosive
Viscosity: 68 - 72 K.U.
Color: grey
V.O.C. mixed: 141 g/l (1.17 lbs/gal)
Finish: low sheen
Temperature resistance (dry):
75°C (167°F) continuous
100°C (212°F) intermittent
Average volume solids: 34.3%
Thinner: water

Recommended Topcoats
Topcoat with any water or solvent base architectural paints.

Performance Criteria Tested to ANSI A250.10-1998(R2011)
Salt spray test:
Standard practice for operating salt spray (fog) apparatus
Method: ASTM B117-03
“X” scribe per ASTM D1654-92 (2000) section 4.1 and 5.1
120 hours continuous exposure
Acceptance criteria:
rust grade less than 6 as defined by ASTM D610-01
undercut less than 1/8” on each side
Performance on galvanneal: pass

Condensation testing (humidity)
Standard practice for testing water resistance of coatings using controlled condensation
Method: ASTM D4585-99
100°F minimum temperature
240 hours continuous exposure
Acceptance criteria:
any amount of #8 blisters as defined by ASTM D714-02
less or equal few #6 blisters as defined by ASTM D714-02
Performance on galvanneal: pass

Impact test:
Standard test method for resistance of organic coatings to the effect of rapid deformation
Method: ASTM D2794-93 (1999)e1
20 inch pounds direct using a Gardner impact tester with ½” diameter ball at 70-75°F
tape (3/4” wide) pull off test using #600 Scotch tape
Acceptance criteria:
no paint film removal other than an area 1/8” in diameter at the center of the impact test
Performance on galvanneal: pass

Film adhesion test:
Standard test methods for measuring adhesion by tape test
Method: ASTM D3359-02
method B with 11 parallel cuts made 1mm apart
tape (1” wide) pull off test
Acceptance criteria:
less or equal 3B as defined by ASTM D3359-02
less or equal 5 -15 % film removal
Performance on galvanneal: pass
Powder coated standard color prefinished at frames

General Properties
POWDURA RAL® Series Durable Polyester TGIC-free Powder Coatings are recommended for a broad range of interior/exterior decorative applications. They are designed for superior weatherability compared to standard polyester powder coatings.

Advantages
Excellent exterior color and gloss retention
Excellent overbake resistance
Good chemical resistance

Application
Cure schedule 10mn @ 205 C
Film thickness range (mils) 2.0-3.0

Attributes
Specific gravity (g/ml) 1.68
Coverage at 1.0 Mil (ft²/lb) 114.8
60° gloss (ASTM D-523) 28-42
Adhesion (ASTM D-3359) 5B
Flexibility (ASTM D-522) pass 1/8”
Pencil hardness (ASTM D-3363) H-2H
Impact resistance (in lb.)
(Dir) 160 in-lbs
(Rev) 160 in-lbs

Performance measured using 24-gauge Bonderite® 1000 test panels.

See www.ralcolor.com
Hospital stops 45°

tack welded, grinded, putty filed
Hospital stops 90°

tack welded, grinded, putty filed
Removable hardware mullion reinforcement, 12ga, without filler block

7” ± 1/8”

C/L of pair

3 1/2” & up
Removable hardware mullion reinforcement, 12ga, with filler block in 12ga

C/L of pair

1 1/2” to 3 3/8”

tack welded
Sound deadening mineral wool
at jambs and/or mullions upon request

Mandatory at mullion when thermal break frame.
Reinforcing for by passing or bifold hardware, 12ga
Spot welded
U reinforcement at head, 14ga
Spot welded
U reinforcement at jamb, 14ga
Spot welded
U reinforcement at head, 12ga
Spot welded
U reinforcement at jamb, 12ga
Spot welded
Positive pressure up to 180 minutes, for frame
Paper thin stick on label with protective film

Located between 1st and 2nd hinge prep when butt hinges or at head when continuous hinge.
Positive pressure up to 90 minutes, for frame
Mylar label with protective film

Located between 1st and 2nd hinge prep when butt hinges or at head when continuous hinge.
Positive pressure up to 60 minutes, for screen or sidelite
Paper thin stick on label with protective film

Located between 1st and 2nd hinge prep when butt hinges or at head when continuous hinge.
Positive pressure 45 minutes
Paper thin stick on label with protective film

Located between 1st and 2nd hinge prep when butt hinges or at head when continuous hinge.
Construction label
Paper thin stick on label with protective film

LABEL CERTIFICATION
FIRE DOOR OR FRAME
LISTED HARDWARE REQUIRED

THIS DOOR OR FRAME EXCEEDS THE LIMITATION THAT WE TESTED. THEREFORE THIS LABEL CERTIFICATION IS SUBMITTED IN LIEU OF A FIRE DOOR OR FRAME LABEL. THE MATERIALS AND MANUFACTURING PROCESS CONFORM COMPLETELY WITH OUR FIRE DOOR OR FRAME PROCEDURE WITH WARNock hersey (WHI)

de La Fontaine
U.S.A.

000000-DLF

Located between 1st and 2nd hinge prep when butt hinges or at head when continuous hinge.
Embossed positive pressure 180 minutes, for frame
18GA and 16GA frame only.

Located between 1st and 2nd hinge prep when butt hinges or
at head when continuous hinge.
Embossed positive pressure 90 minutes, for frame
18GA and 16GA frame only.

Located between 1st and 2nd hinge prep when butt hinges or
at head when continuous hinge.
**Embossed positive pressure 45 minutes, for frame**
18GA and 16GA frame only.

Located between 1st and 2nd hinge prep when butt hinges or at head when continuous hinge.
Riveted positive pressure up to 180 minutes, for frame
Mylar label with protective film

LISTED FIRE DOOR FRAME
VALID UP TO 180 MINUTES

POSITIVE PRESSURE
SMOKE & DRAFT LABEL VALID
ONLY WHEN GASKET IS USED

SEE INSTALLATION INSTRUCTIONS

Located between 1st and 2nd hinge prep when butt hinges or
at head when continuous hinge.
Riveted positive pressure up to 90 minutes, for frame, for screen or sidelight
Mylar label with protective film

Located between 1st and 2nd hinge prep when butt hinges or at head when continuous hinge.
Riveted positive pressure up to 60 minutes, for screen or sidelight
Mylar label with protective film

Located between 1st and 2nd hinge prep when butt hinges or at head when continuous hinge.
Located between 1st and 2nd hinge prep when butt hinges are at head when continuous hinge.
**Riveted construction label**
Mylar label with protective film

---

**LABEL CERTIFICATION**
FIRE DOOR OR FRAME
LISTED HARDWARE REQUIRED

THIS DOOR OR FRAME EXCEEDS THE LIMITATION THAT WE TESTED. THEREFORE THIS
LABEL CERTIFICATION IS SUBMITTED IN LIEU OF A FIRE DOOR OR FRAME LABEL. THE
MATERIALS AND MANUFACTURING PROCESS CONFORM COMPLETELY
WITH OUR FIRE DOOR OR FRAME PROCEDURE WITH WARNock HERSEy (WH)

WH

---

Located between 1st and 2nd hinge prep when butt hinges or
at head when continuous hinge.
**Windstorm Class 1 - 70psf/350 ft-lbs**

Paper thin stick on label with protective film

LISTED WINDSTORM RESISTANT
DOOR OR FRAME
CLASS 1 DOOR - 70 psf
OUTSWING - 350 ft-lbs

**de La Fontaine**

U.S.A.

Located between 1st and 2nd hinge prep when butt hinges or at head when continuous hinge.
Communicating frame
Handing shown based on any and all point of views

Single opening: hinges on same jamb

Single opening: hinges on opposite jambs

Paired opening

RHR/LH
RHRA/LHI-RHA/LHI
LHRA/RHI-LHA/RHI
LHA/RHI-RHA/LHI
RHA/LHI-LHA/RLH
LHRA/RHI-LHA/RHI
RHRA/LHI-RHA/LHI

March 2017
Dutch door frame
DLF location shown

7'-2'' (86'')
7'-0'' (84'')
6'-10'' (82'')
6'-8'' (80'')

30 1/8''
28 1/8''
26 1/8''
24 1/8''

48 1/2''
47 1/2''
45 1/2''
43 1/2''

7 3/8''
7 3/8''
6 9/8''
6 7/8''

optional strike
strike

36 9/8''
52''
2" sill with 45° miters (4 sided frame)
Welded or knock down
1/2" sill with square ends for standard 3 sided frame
Shipped loose
A40 (ZF120) hot dipped galvannealed steel

General information:

Our A40 material is compliant with the ASTM A653/A653M specifications. Which specification for steel sheet, zinc-coated (galvanized) or zinc-iron (galvannealed) by the hot dipped process.

Zinc-iron coating of 0.30 oz/ft² total both sides per the single spot test. In SI units it would be 90g/m² total both sides per the same test and listed under ZF120.
A60 (ZF180) hot dipped galvannealed steel

General information:

Our A60 material is compliant with the ASTM A653/A653M specifications. Which specification for steel sheet, zinc-coated (galvanized) or zinc-iron (galvannealed) by the hot dipped process.

Zinc-iron coating of 0.50 oz/ft$^2$ total both sides per the single spot test. In SI units it would be 150g/m$^2$ total both sides per the same test and listed under ZF180.
G90 (Z275) hot dipped galvanized steel

General information:

Our G90 material is compliant with the ASTM A653/A653M specifications. Which specification for steel sheet, zinc-coated (galvanized) or zinc-iron (galvannealed) by the hot dipped process.

Zinc coating of 0.80 oz/ft² total both sides per the single spot test. In SI units it would be 235g/m² total both sides per the same test and listed under Z275.

Primed not available
Frame profile for 1 3/8" door thickness
At jambs and head

For LR, SR, DR and DW series
Frame profile for 2" door thickness
At jambs and head

2\(\frac{3}{16}\)" varies 1\(\frac{15}{16}\)"

For LR, SR, DR and DW series
Frame profile for 2 1/4" door thickness
At jambs and head

For LR, SR, DR and DW series
Frame profile for special door thickness
At jambs and head

For LR, SR, DR and DW series
Thermal break frame
At jambs, head and mullion

PVC insert
"Z" clip

For welded 16ga or 14ga frames only
Unequal rabbet
At jambs and head

For LR, SR, DR and DW series
Centered glass
At lite(s) in borrowed lite, sidelite and transom section

For LR, SR, DR and DW series
Caulking groove
At jambs and head

Double Rabbet

Single Rabbet

Centered glass

Cased Open
Double stepped Ogee
Double stepped Ogee
Hemmed
At jambs and head

Double Rabbet

Single Rabbet

Centered glass

Cased Open
Kerf frame
At jambs and head

- DR, SR, LR series, 14 & 16ga only
- Rating same limitations as standard frames
- Minimum 5” JD, maximum 15”
- With or without weatherstripping

See SLW
Weatherstripping for Kerf frame
Shipped loose

Silicone Weatherstrip
Pemko S52BL100
**Radius edge, 1/2" R**

At jambs and head

\[ \frac{1}{2}'' \quad 1\frac{5}{16}'' \]

at Double rabbet

\[ \frac{5}{8}'' \]

at Single rabbet

at Cased open

For LR, SR, DR and DW series
Radius edge, 3/4" R
At jambs and head

- At Double rabbet
- At Single rabbet
- At Cased open

For LR, SR, DR and DW series
**Shadow line**
At jambs and head

Double Rabbet

Single Rabbet

Centered glass

Cased Open
Splayed stop
with single rabbet profile only

For LR, SR, DR and DW series
Lead lined frame, full width 1/16"
Welded frame only

at double rabbet

Spot welded steel clips

at single rabbet

Spot welded steel clips

For LR, SR, and DR series
Lead lined frame, full width 1/8"
Welded frame only, 14ga minimum

at double rabbet

Spot welded steel clips

at single rabbet

Spot welded steel clips

For LR, SR, and DR series
Lead lined frame, half width 1/16"n
Welded frame only

at double rabbet

Spot welded steel clips

at single rabbet

Spot welded steel clips

For LR, SR, and DR series
Lead lined frame, half width 1/8"
Welded frame only, 14ga minimum

at double rabbet

Spot welded steel clips

at single rabbet

Spot welded steel clips

For LR, SR, and DR series
SPECIALTY PRODUCTS
SPECIALTY PRODUCTS

STC Assemblies
  STC General notes ................................................................. S-4

16ga Rough Buck Frame
  RB16 .................................................................................. S-6

14ga Rough Buck Frame
  RB14 .................................................................................. S-8

12ga Rough Buck Frame
  RB12 .................................................................................. S-10

Windstorm frame
  FWIND ............................................................. S-12

Windstorm door
  DWIND ............................................................. S-14

Pocket door frame
  PD ............................................................. S-16
STC general information

DE LA FONTAINE Industries offers openings with STC ratings up to and including STC48, in compliance with the following standards:

- ASTM E90 (Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements)
- ASTM E413 (Classification Standard for Rating Sound Insulation)
- ASTM E1332 (Standard Classification for Rating Outdoor-Indoor Sound Attenuation)

This rating is evaluated according to the operable method. The opening includes the frame, the door, and the acoustical gasketing.

The maximum dimensions for this opening are 4'0" x 8'0" with a door thickness of 1 3/4". Double doors are also available; however, this option has a rating for which we have not yet conducted an official evaluation.

- Cased open regular profile frame based on STC required. The frame must be filled with mortar on the job site.
- Door (PA series), 14-, 16- or 18-gauge.
- Soundproof jamb and head gasketing.
- Automatic door bottom.

The hardware must nonetheless be installed in accordance with the manufacturer's specifications and by a qualified installer. Because DE LA FONTAINE does not assemble the frame and hardware in the factory, we cannot guarantee that the opening will meet the desired rating.
16ga Rough buck frame
KD assembly

Sub frame legs 1/4" shorter than R.O. for floor irregularities.
Nominal opening equals rough opening less 4" in height and width.
14ga Rough buck frame
KD assembly

12ga full sleeve, full width closer reinforcement

Sub frame installation
1/4" Tapcon screws at head and jamb

Sub frame added reinforcing for 5 3/4" of jamb depth and over.

Finish frame assembly
#12-24 x 1" self-drilling center pin torx security screws

Adjustable floor anchor, (1 3/8" maximum adjustment)

JAMBS
2" (variable from 1 3/4")
1/4" (varies accordingly)

HEAD
4" (variable from 3 3/4")
1/4" (varies accordingly)

Exterior walls
4" minimum section to butt on masonry wall

4" masonry wall
void
brick wall or other

Sub frame legs 1/4" shorter than R.O. for floor irregularities.
Nominal opening equals rough opening less 4" in height and width.
12ga Rough buck frame
KD assembly

12ga full sleeve, full width closer reinforcement

Sub frame 12ga

Finish frame 12ga

no silencer hole at strike jamb

Sub frame installation
1/4" Tapcon screws at head and jambs

Sub frame added reinforcing
for 5 3/4" of jamb depth and over.

Finish frame assembly
#12-24 x 1" self-drilling center pin torx security screws

Adjustable floor anchor,
(1 3/8" maximum adjustment)

JAMBS
2" (variable from 1 3/4"

1/4" (varies accordingly)

HEAD
4" (variable from 3 3/4"

1/4" (varies accordingly)

Exterior walls
4" minimum section to butt on masonry wall

4" masonry wall

void

brick wall or other

Sub frame legs 1/4" shorter than R.O. for floor irregularities.
Nominal opening equals rough opening less 4" in height and width.
Windstorm Class 1 frame
Welded assembly

- surface bolt,
  or surface vertical rod device,
  or concealed vertical rod device,
  note: 7ga tabs when required.
  or hardware mullion,
  at pairs

- butt hinges only

- ASA strike (7ga tabs)
  or rim exit device strike
  at singles

- 2" face frame only,
  Double rabbet profile

- LR, SR and DR series available,
  minimum 16ga material,
  Existing Wall Anchor with tube only.

Maximum 3'0" x 7'0" at singles (16ga) and 6'0" x 7'0" at pairs (14ga).
Windstorm Class 1 door
Outswinging door; Pressure: 70psf; Impact: 350lb-ft.

standard inverted top channel
(closed optional)

butt hinges only

24" x 64" maximum cutout sizes
StromPro-Hr from Anemostat
cutout=order size
visible lite=cutout - 2 1/2"

cylindrical(10ga), mortise(10ga)
or rim exit device
at singles

cylindrical(10ga) x strike + surface
or mortise(10ga) x strike + surface
or rim x rim x hardware mullion
or surface x surface
or concealed x concealed
at pairs

standard inverted bottom channel
(closed optional)

CW series only,
minimum 16 gage material.
steel stiffened with polystyrene

Maximum 3'0"x 7'0" at singles and 6'0"x 7'0" at pairs.
Pocket door frame
Available single or double, with or without side unit

Face welded, 16ga, "Z" anchors, 1 3/4" door, 5 3/4" minimum jamb depth.
Based on a 3070 slab door.
DOOR AND FRAME PARTS
DOOR AND FRAME PARTS

Door parts

Hinge reinforcement
- 56514- 4 ½” standard weight (0.134) ......................................................... P-4.1
- 56512- 4 ½” heavy weight (0.134) ................................................................. P-4.2
- 56508- 4 ½” convertible (0.134/0.180) ......................................................... P-4.3
- 03134- 5” standard weight (0.146) ............................................................... P-4.4
- 03135- 5” heavy weight (0.190) ................................................................. P-4.5

Lock/strike reinforcement
- 39406- Ring for cylindrical and deadlock strike (18ga) ............................. P-4.6
- 00789- Plate for cylindrical and deadlock strike (12ga) ............................ P-4.7
- 00746- Mortise lock tab (12ga) ................................................................. P-4.8
- 00359- ANSI A156-16 flush bolt tab (12ga) for edge of door ................. P-4.9
- 00583- ANSI A156-16 flush bolt guide (12ga) for top and bottom .......... P-4.10
- 39438- Mortise lock and dead lock box (16ga) .......................................... P-4.11
- 00710- Standard ANSI 4 7/8” strike (16ga) .............................................. P-4.12
- 00597- Standard 2 ¾” and cylindrical dead lock strike (12ga) ................. P-4.13

End channels/cap
- 03085- Standard inverted end channel for 3’0” door ............................... P-4.14
- 03096- Standard inverted end channel for 4’0” door ............................... P-4.15
- 00092- Vinyl cap for 3’0” door ................................................................. P-4.16
- 00093- Vinyl cap for 4’0” door ................................................................. P-4.17
- 00111- Vinyl cap 12’ long ..................................................................... P-4.18

Capping channels for cut out
- 00634 -71” long capping channel .............................................................. P-4.19
- 54493- 84” long capping channel ............................................................ P-4.20
- 54494- 120” long capping channel .......................................................... P-4.21

Sandwich type lite kit
- 40112- 5” x 20” exposed glass, ¼” glass, 1 ¾” door ..................................... P-4.22
- 40113- 10” x 10” exposed glass, ¼” glass, 1 ¾” door ............................... P-4.23
- 40114- 4” x 25” exposed glass, ¼” glass, 1 ¾” door ............................... P-4.24
- 40115- 3” x 33” exposed glass, ¼” glass, 1 ¾” door ............................... P-4.25
- 40116- 22” x 30” exposed glass, ¼” glass, 1 ¾” door ............................. P-4.26
- 54754- 22” x 62” exposed glass, ¼” glass, 1 ¾” door ............................. P-4.27

Dutch door shelf
- 00851- Full dutch door shelf ................................................................. P-4.28
- 00852- Half dutch door shelf ................................................................. P-4.29

Fillers
- 00540- 4 ½” standard weight screwed on filler ........................................ P-4.30
- 00539- 4 ½” heavy weight screwed on filler ........................................... P-4.31
DOOR AND FRAME PARTS

00538- ASA strike screwed on filler ......................................................... P-5.1
00546- Flush bolt, edge prep, screwed on filler ........................................ P-5.2
00544- Mortise screwed on filler ................................................................. P-5.3
00533- Cylindrical lock, 161, screwed on filler ........................................ P-5.4

Astragals

00458- Flat bar astragal (12ga), 79 1/8” ......................................................... P-5.5
00459- Flat bar astragal (12ga), 83 1/8” ......................................................... P-5.6
00460- Flat bar astragal (12ga), 95 1/8” ......................................................... P-5.7
37816- “Z” astragal, (14ga), ASA, 79 1/8”, REVH ..................................... P-5.8
37817- “Z” astragal (14ga), Inactive door, 79 1/8”, REVH .......................... P-5.9
37818- “Z” astragal (14ga), ASA+FB, 79 1/8”, REVH .............................. P-5.10
37819- “Z” astragal (14ga), Inactive door, 83 1/8”, REVH ....................... P-5.11
37820- “Z” astragal, (14ga), ASA, 83 1/8”, LH ......................................... P-5.12
37821- “Z” astragal, (14ga), ASA, 83 1/8”, RH ......................................... P-5.13
37822- “Z” astragal (14ga), ASA+FB, 83 1/8”, LH .................................... P-5.14
37823- “Z” astragal (14ga), ASA+FB, 83 1/8”, RH .................................... P-5.15
53683- Flat bar astragal (12ga), 79 1/8”, Primed ........................................ P-5.16
53684- Flat bar astragal (12ga), 83 1/8”, Primed ........................................ P-5.17
53685- Flat bar astragal (12ga), 95 1/8”, Primed ........................................ P-5.18
53906- “Z” astragal, (14ga), ASA, 95 1/8”, LH ......................................... P-5.19
53907- “Z” astragal, (14ga), ASA, 95 1/8”, RH ......................................... P-5.20
53908- “Z” astragal (14ga), ASA+FB, 95 1/8”, LH .................................... P-5.21
53909- “Z” astragal (14ga), ASA+FB, 95 1/8”, RH .................................... P-5.22
54811- “Z” astragal, (14ga), ASA, 79 1/8”, REVH, Primed ...................... P-5.23
54812- “Z” astragal (14ga), Inactive door, 79 1/8”, REVH, Primed ............ P-5.24
54813- “Z” astragal (14ga), ASA+FB, 79 1/8”, REVH, Primed .................. P-5.25
54814- “Z” astragal (14ga), Inactive door, 83 1/8”, REVH, Primed ............ P-5.26
54815- “Z” astragal, (14ga), ASA, 83 1/8”, LH, Primed ............................ P-5.27
54816- “Z” astragal, (14ga), ASA, 83 1/8”, RH, Primed ............................ P-5.28
54817- “Z” astragal (14ga), ASA+FB, 83 1/8”, LH, Primed ....................... P-5.29
54818- “Z” astragal (14ga), ASA+FB, 83 1/8”, RH, Primed ....................... P-5.30
54819- “Z” astragal, (14ga), ASA, 95 1/8”, LH, Primed ............................ P-5.31
54820- “Z” astragal, (14ga), ASA, 95 1/8”, RH, Primed ............................ P-5.32
54821- “Z” astragal (14ga), ASA+FB, 95 1/8”, LH, Primed ....................... P-5.33
54822- “Z” astragal (14ga), ASA+FB, 95 1/8”, RH, Primed ....................... P-5.34
55100- Flat bar astragal (12ga), 120” ......................................................... P-5.35
55101- Flat bar astragal (12ga), 120”, Primed .................................................. P-5.36
55116- “Z” astragal (14ga), Inactive door, 95 1/8”, REVH ......................... P-5.37
56812- “Z” astragal (14ga), Inactive door, 95 1/8”, REVH, Primed ............... P-5.38
56815- “Z” astragal (14ga), ASA+FB(24” top), 95 1/8”, LH ....................... P-5.39
56816- “Z” astragal (14ga), ASA+FB(24” top), 95 1/8”, LH, Primed .......... P-5.40
56819- “Z” astragal (14ga), ASA+FB(24” top), 95 1/8”, RH ....................... P-5.41
DOOR AND FRAME PARTS

56820- “Z” astragal (14ga), ASA+FB (24” top), 95 1/8”, RH, Primed .......... P-6.1
10862/Eng001- "Z" astragal (14ga), ASA+FB, 73 1/8", LH, w/reinf. .......... P-6.2
10862/Eng002- “Z” astragal (14ga), ASA+FB, 73 1/8”, RH, w/reinf. .......... P-6.3
Frame parts

Hinge reinforcement
56514- 4 ½” standard weight (0.134) ............................................................... P-7.1
56512- 4 ½” heavy weight (0.134) ................................................................... P-7.2
56508- 4 ½” convertible (0.134/0.180) ............................................................. P-7.3
03105- 5” standard weight (0.146) ................................................................... P-7.4
03104- 5” heavy weight (0.190) ....................................................................... P-7.5
00497- Mortar Guard for 4 ½” hinge ............................................................ P-7.6
00499- Mortar Guard for 5” hinge ............................................................... P-7.7
00810- Electric box for EPT and EH ............................................................ P-7.8

Strike reinforcement
00606- Standard ANSI 4 7/8” strike reinforcement ........................................ P-7.9
00832- Standard 2 ¾” strike reinforcement .................................................... P-7.10
00832- Deadlock strike reinforcement .......................................................... P-7.11
00509- ANSI A156-16 flush bolt reinforcement .......................................... P-7.12
00854- Reversible flush bolt reinforcement ................................................... P-7.13
00711- 3 ½” mortise deadlock strike reinforcement ...................................... P-7.14

Closer reinforcement
00690- Closer reinforcement, 1 3/4” x 14” ..................................................... P-7.15
00691- Closer reinforcement, 1 1/2” x 14” ..................................................... P-7.16
00692- Closer reinforcement, 1 1/4” x 14” ..................................................... P-7.17

Assembly parts
00869- Jamb and head mechanical connecting tab, reversible ...................... P-7.18
00560- Gusset for knocked down series ...................................................... P-7.19

Anchor parts
00416- DSA, drywall strap anchor, 2” face ................................................. P-7.20
00357- “T” masonry anchor, 2” face, 5 3/4” jamb depth ................................ P-7.21
00356- “T” masonry anchor, 2” face, 4 3/4” to 8 3/4” jamb depth ................ P-7.22
00353- WMA, wire masonry anchor ......................................................... P-7.23
03041- ZBA, steel stud anchor 4 1/4”, 2” face, 3 1/2” to 3 7/8” wall .......... P-7.24
03042- ZBA, steel stud anchor 4 3/4”, 2” face, 4” to 4 3/8” wall ............... P-7.25
03043- ZBA, steel stud anchor 5 1/4”, 2” face, 4 1/2” to 4 7/8” wall .......... P-7.26
03044- ZBA, steel stud anchor 5 3/4”, 2” face, 5” to 5 3/8” wall ............... P-7.27
03046- ZBA, steel stud anchor 6 3/4”, 2” face, 6” to 6 3/8” wall ................ P-7.28
03051- ZBA, steel stud anchor 9 1/4”, 2” face, 8 1/2” to 8 7/8” wall .......... P-7.29
00426- EWA, existing wall anchor spacer 4 1/2” to 7 3/8” JD ................. P-7.30
00427- EWA, existing wall anchor spacer 7 1/2” to 9 3/8” JD .................. P-7.31
## DOOR AND FRAME PARTS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>00397</td>
<td>Floor anchor not sized (need 2 per jamb)</td>
<td>P-8.1</td>
</tr>
<tr>
<td>00398</td>
<td>Floor anchor 3 1/2” (need 1 per jamb)</td>
<td>P-8.2</td>
</tr>
<tr>
<td>00399</td>
<td>Floor anchor 4 1/2” (need 1 per jamb)</td>
<td>P-8.3</td>
</tr>
<tr>
<td>54602</td>
<td>Mullion floor anchor for 5 3/4” JD</td>
<td>P-8.4</td>
</tr>
<tr>
<td>00415</td>
<td>Mullion floor anchor for 5 7/8” JD</td>
<td>P-8.5</td>
</tr>
<tr>
<td>00858</td>
<td>Compression anchor form 16ga KD frame (leveling screw)</td>
<td>P-8.6</td>
</tr>
<tr>
<td>00355</td>
<td>Adj. stud anchor 4 3/4”, 5 1/4”, 5 3/4”, 6 1/4”, 6 3/4” JD (2 parts per anchor)</td>
<td>P-8.7</td>
</tr>
<tr>
<td>00435</td>
<td>SDS, Snap-in drywall strap (2 parts per anchor)</td>
<td>P-8.9</td>
</tr>
<tr>
<td>00358</td>
<td>Existing wall anchor with tube, 16ga</td>
<td>P-8.10</td>
</tr>
<tr>
<td>00075</td>
<td>Glazing bead 5/8” x 5/8” x 10’0” without dimples</td>
<td>P-8.11</td>
</tr>
<tr>
<td>00095</td>
<td>Glazing bead 5/8” x 5/8” x 10’0” punched and dimpled</td>
<td>P-8.12</td>
</tr>
<tr>
<td>03059</td>
<td>3′0” long</td>
<td>P-8.13</td>
</tr>
<tr>
<td>03063</td>
<td>4′0” long</td>
<td>P-8.14</td>
</tr>
<tr>
<td>03064</td>
<td>5′0” long</td>
<td>P-8.15</td>
</tr>
<tr>
<td>03065</td>
<td>6′0” long</td>
<td>P-8.16</td>
</tr>
<tr>
<td>03066</td>
<td>10′0” long</td>
<td>P-8.17</td>
</tr>
<tr>
<td>00541</td>
<td>4 1/2” Standard weight hinge filler (screwed)</td>
<td>P-8.18</td>
</tr>
<tr>
<td>00542</td>
<td>4 1/2” Heavy weight hinge filler (screwed)</td>
<td>P-8.19</td>
</tr>
<tr>
<td>00543</td>
<td>ASA strike filler (screwed)</td>
<td>P-8.20</td>
</tr>
</tbody>
</table>
MISCELLANEOUS

00114- Self drill screw #8-18x1/2” Phillips flat undercut head ZP #2 point .... P-9.1
00089- Self drill screw #6x1” Phillips oval head ZP ........................................ P-9.2
00216- Self drill screw #6-20x1-7/8” Phillips bugle head ZP #2 point .......... P-9.3
00046- Rubber bumper-Silencers ................................................................. P-9.4
00050- Knocked down screw ....................................................................... P-9.5
00087- Masonry sleeve anchor 3/8” x 4” ....................................................... P-9.6
00088- Masonry sleeve anchor 3/8” x 5” ....................................................... P-9.7
00190- Masonry sleeve anchor 3/8” x 4” in stainless steel ......................... P-9.8
00088- Masonry sleeve anchor 3/8” x 5” in stainless steel ......................... P-9.9
4 1/2" standard weight hinge reinforcement (0.134), 7ga at PA door

See option 45S on page O-4.1 for reference on location in door
4 1/2" heavy weight hinge reinforcement (0.180), 7ga
at PA door

See option 45H on page O-4.2 for reference on location in door
4 1/2" convertible hinge reinforcement (0.134/0.180), 7ga
at PA door

See option 45C on page O-4.3 for reference on location in door
5" standard weight hinge reinforcement (0.146), 7ga
at PA door

See option 50S on page O-4.4 for reference on location in door
5" heavy weight hinge reinforcement (0.190), 7ga
at PA door

See option 50H on page O-4.5 for reference on location in door
Ring for cylindrical and dead lock strike, 18ga
at PA door, for 2 3/4" backset

0.750  2.800  0.750
    1.200

0.750  1.630

0.273  2.800  0.273
      1.500
      0.414
      0.586

155°
R1.625
0.500

See option 161 on page O-4.27 for additional information.
Plate for cylindrical and dead lock strike, 16ga
at PA door

See option 161 on page O-4.27 for additional information
Mortise lock tab, 12ga
at PA door

tapped for #12-24 screw

See option 86ED on page O-4.31 for additional information
ANSI A156-16 flush bolt tab at edge of door, 12ga
at PA door

See option FB on page O-5.27 for additional information
ANSI A156-16 flush bolt guide for top and bottom, 12ga

See option FB on page O-5.27 for additional information
Mortise lock and deadlock box, 16ga

bendable tabs at top and bottom for connector when raceway

1.750

4.625

1.665

0.625

See option 86ED on page O-4.31 for additional information
Standard ANSI 4 7/8" strike, 16ga
at PA door

7.500 ± 0.063
1.126 ± 0.031
4.125 ± 0.015
0.156 ± 0.031
3.623
1.251

See option ASA on page O-5.19 for additional information
Standard 2 3/4" and cylindrical deadlock strike, 12ga at PA door

See option DL234 on page O-5.17 for reference on location in door
Standard inverted end channel for 3’0” door, 16ga
35 5/16” finished width
Standard inverted end channel for 4'0" door, 16ga
47 5/16" finished width

90.00° +0.50° -0.00°

0.900 ±0.030

1.665 ±0.010
Vinyl cap for 3'0" door
36 1/4" finished width

extruded PVC

See option VIN on page O-8.8 for additional information
Vinyl cap for 4'0" door
48 1/4" finished width

extruded PVC

See option VIN on page O-8.8 for additional information
Vinyl cap 12'0" long

extruded PVC

See option VIN on page O-8.8 for additional information
71" long capping channel, 18ga
for sandwich type kit and louver cutout only

See option CH on page O-10.13 for additional information
84" long capping channel, 18ga
for sandwich type kit and louver cutout only

See option CH on page O-10.13 for additional information
120" long capping channel, 18ga
for sandwich type kit and louver cutout only

See option CH on page O-10.13 for additional information
5" x 20" exposed glass, for 1/4" thick glass
for 1 3/4" thick door

See option SK on page O-10.4 for additional information
10" x 10" exposed glass, for 1/4" thick glass
for 1 3/4" thick door

See option SK on page O-10.1 for additional information
4" x 25" exposed glass, for 1/4" thick glass
for 1 3/4" thick door

See option SK on page O-10.3 for additional information
3" x 33" exposed glass, for 1/4" thick glass
for 1 3/4" thick door

See option SK on page O-10.2 for additional information
22" x 30" exposed glass, for 1/4" thick glass
for 1 3/4" thick door

See option SK on page O-10.10 for additional information
22" x 62" exposed glass, for 1/4" thick glass
for 1 3/4" thick door

See option SK on page O-10.12 for additional information
Full dutch door shelf, 16ga, for 3'0" nominal door
for 1 3/4" thick door

brackets, 16ga
spot welded to shelf,
to be screwed to door
Half dutch door shelf, 16ga, for 3'0" nominal door
for 1 3/4" thick door

brackets, 16ga
spot welded to shelf,
to be screwed to door
4 1/2" standard weight hinge filler, screwed
for 1 3/4" thick door
4 1/2" heavy weight hinge filler, screwed
for 1 3/4" thick door
ASA strike filler, screwed
for 1 3/4" thick door
Flush bolt, edge prep filler, screwed
for 1 3/4" thick door
Mortise filler, screwed
for 1 3/4" thick door
Cylindrical lock filler, screwed
for 1 3/4" thick door
Flat bar astragal 79 1/8", 12ga

predrilled 1/4"Ø, countersunk for #8 screws

See option FAS on page O-7.1 for additional information
Flat bar astragal 83 1/8", 12ga

predrilled 1/4" φ,
countersunk for #8 screws

10 ± 3/2 c/c

5/8

1 3/4

See option FAS on page O-7.1 for additional information
Flat bar astragal 95 1/8", 12ga

predrilled 1/4”Ø, countersunk for #8 screws

10 1/4 ± 1/2 c/c

1 3/4

See option FAS on page O-7.1 for additional information
"Z" astragal, 14ga, ASA, 79 1/8", REVH

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, Inactive door, 79 1/8", REVH

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA+FB, 79 1/8", REVH

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, Inactive door, 83 1/8", REVH

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA, 83 1/8", LH

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA, 83 1/8", RH

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA+FB, 83 1/8", LH

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA+FB, 83 1/8", RH

See option ZAS on page O-7.2 for additional information
Flat bar astragal 79 1/8", 12ga, Primed

predrilled 1/4"∅,
countersunk for #8 screws

See option FAS on page O-7.1 for additional information
Flat bar astragal 83 1/8”, 12ga, Primed

predrilled 1/4”φ, countersunk for #8 screws

10 ± 1/2 c/c

5/8

1 3/4

See option FAS on page O-7.1 for additional information
Flat bar astragal 95 1/8", 12ga, Primed

predrilled 1/4" ø, countersunk for #8 screws

10 1/4 ± 1/32 c/c

1 3/4 c/c

See option FAS on page O-7.1 for additional information
"Z" astragal, 14ga, ASA, 95 1/8", LH

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA, 95 1/8", RH

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA+FB, 95 1/8", LH

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA+FB, 95 1/8", RH

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA, 79 1/8", REVH, Primed

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, Inactive door, 79 1/8", REVH, Primed

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA+FB, 79 1/8", REVH, Primed

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, Inactive door, 83 1/8", REVH, Primed

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA, 83 1/8", LH, Primed

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA, 83 1/8", RH, Primed

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA+FB, 83 1/8", LH, Primed

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA+FB, 83 1/8", RH, Primed

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA, 95 1/8", LH, Primed

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA, 95 1/8", RH, Primed

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA+FB, 95 1/8", LH, Primed

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA+FB, 95 1/8", RH, Primed

See option ZAS on page O-7.2 for additional information
Flat bar astragal 120", 12ga

predrilled $\frac{1}{4}" \varnothing$, countersunk for #8 screws

See option FAS on page O-7.1 for additional information
Flat bar astragal 120”, 12ga, Primed

predrilled ¼” φ, countersunk for #8 screws

10 5/8 ± 3/8 c/c

1 3/4

See option FAS on page O-7.1 for additional information
"Z" astragal, 14ga, Inactive door, 95 1/8", REVH

See option ZAS on page 0-7.2 for additional information
"Z" astragal, 14ga, Inactive door, 95 1/8", REVH, Primed

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA+FB(24" top), 95 1/8", LH

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA+FB(24"top), 95 1/8", LH, Primed

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA+FB(24" top), 95 1/8", RH

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA+FB(24" top), 95 1/8", RH, Primed

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA+FB, 83 1/8", LH, with reinforcements

See option ZAS on page O-7.2 for additional information
"Z" astragal, 14ga, ASA+FB, 83 1/8", RH, with reinforcements

See option ZAS on page O-7.2 for additional information
4 1/2" standard weight hinge reinforcement (0.134), 7ga

See option 45S on page O-12.1 for additional information
4 1/2" heavy weight hinge reinforcement (0.180), 7ga

See option 45H on page O-12.2 for additional information
4 1/2" convertible hinge reinforcement (0.134/0.180), 7ga

See option 45C on page 0-12.3 for additional information
5" standard weight hinge reinforcement (0.146), 7ga

See option 50S on page O-12.4 for additional information
5" heavy weight hinge reinforcement (0.190), 7ga

See option 50H on page O-12.5 for additional information
Mortar guard for 4 1/2" hinge, 26ga

by default at masonry frame with TMA, WMA or ATMA
Mortar guard for 5” hinge, 18ga

by default at masonry frame with TMA, WMA or ATMA
Electric box for EPT or EH, 16ga
Standard ANSI 4 7/8" strike reinforcement, 16ga

See option ASA on page O-13.7 for additional information
Standard 2 3/4" strike reinforcement, 16ga

See option T on page O-13.11 for additional information
Deadlock strike reinforcement, 16ga

See option DL234 on page O-13.12 for additional information
ANSI A156-16 flush bolt reinforcement, 16ga

See option FBS on page O-13.26 for additional information
Reversible flush bolt reinforcement, 16ga

#8–32 x ½” Phillips flat undercut ZP

strike’s faceplate

See option RFBS on page O-13.14 for additional information
3 1/2" mortise deadlock strike reinforcement, 16ga

See option DL312 on page O-13.14 for additional information
Closer reinforcement, 12ga
Closer reinforcement, 12ga

14.000

1.500
Jamb and head mechanical connecting tab, reversible
For 45° saw mitered knocked down assembly

Clean interior burrs prior to reversible tab installation
Gusset for knocked down series, 20ga
Need 2 per jamb

See option KD on page O-15.28 for additional information
DSA, drywall strap anchor for 2" face jambs, 18ga

See option DSA on page O-15.2 for additional information
T masonry anchor, 16ga, 2" face, SR series, 5 3/4" jamb depth

See option TMA on page O-15.10 for additional information
T masonry anchor, 16ga, 2" face, SR series, 4 3/4" to 8 3/4" jamb depth

See option TMA on page O-15.10 for additional information
WMA, wire masonry anchor

See option WMA on page O-15.11 for additional information
ZBA, steel stud anchor 4 1/4", 2" face, 3 1/2" to 3 7/8" wall

See option ZBA on page O-15.6 for additional information
ZBA, steel stud anchor 4 3/4", 2" face, 4" to 4 3/8" wall

See option ZBA on page O-15.6 for additional information
ZBA, steel stud anchor 5 1/4", 2" face, 4 1/2" to 4 7/8" wall

See option ZBA on page O-15.6 for additional information
ZBA, steel stud anchor 5 3/4", 2" face, 5" to 5 3/8" wall

See option ZBA on page O-15.6 for additional information
ZBA, steel stud anchor 6 3/4", 2" face, 6" to 6 3/8" wall

See option ZBA on page O-15.6 for additional information
ZBA, steel stud anchor 9 1/4", 2" face, 8 1/2" to 8 7/8" wall

See option ZBA on page O-15.6 for additional information
EWA, existing wall anchor 4 1/2" to 7 3/8" jamb depth

See option EWA on page O-15.12 for additional information
EWA, existing wall anchor 7 1/2" to 9 3/8" jamb depth

See option EWA on page O-15.12 for additional information
Floor anchor not sized, 16ga

See option FA on page O-15.24 for additional information
Floor anchor 3 1/2, 16ga

See option FA on page O-15.24 for additional information
Floor anchor 4 1/2, 16ga

See option FA on page O-15.24 for additional information
Mullion floor anchor for 5 3/4" jamb depth, 16ga

1.813±0.010

5\frac{9}{18}±1/32

\frac{53}{4} Exterieur

2 Face
Mullion floor anchor for 5 7/8" jamb depth, 16ga
Compression anchor for 16ga knocked down frame

Screw 1/4"-20 x 1"
Round Washer VREX ZP

0.036
0.750
1.062

20ga

1.250

1.000

18ga

See option KD/KDS on pages O-15.28 and O-15-.30 for additional information
SWS, adjustable wood/steel stud anchor for 4 3/4" to 6 3/4" jamb depth
Need 2 of to make a full anchor

See option SWS on page O-15.8 for additional information
SWS, adjustable wood/steel stud anchor for 5 3/4” to 8 3/4” jamb depth

Need 2 of to make a full anchor

5 3/4” min.
8 3/4” max.

16ga

See option SWS on page O-15.8 for additional information
SDS, snap-in drywall strap, 16ga
for DW and DR series

See option SDS on page O-15.3 for additional information
EWAT, existing wall anchor with tube, 4 3/4" to 8 3/4" jamb depth

See option EWAT on page O-15.18 for additional information
Glazing bead 5/8" x 5/8" x 10'0" without dimples
Glazing bead 5/8" x 5/8" x 10'0" punched and dimpled
3'0" long, 16ga

Spreader bar

- 1" ±1/32"
4'0" long, 16ga

Spreader bar

Dimensions:
- 3/4" width
- 1" height
- ±1/32" tolerance
5'0" long, 16ga
6'0" long, 16ga
10'0" long, 16ga

Spreader bar
4 1/2" standard weight hinge filler, screwed
for 1 3/4" thick door
4 1/2" heavy weight hinge filler, screwed
for 1 3/4" thick door
ASA strike filler, screwed
for 1 3/4" thick door
Self drill screw for astragal
#8-18 x 1/2" Phillips flat undercut head ZP #2 point

See options FAS, ZAS, SAS on pages O-7.1,.2,.5 for additional information
Self drill screw for glazing bead

#6 x 1" Phillips oval head ZP

See on page C-17 for additional information
Self drill screw for vinyl cap
#6-20 x 1 7/8" Phillips bugle head ZP #2 point
Rubber bumper/silencer

Three at strike jamb or two at head when paired opening
Knock down screw

#8 -15 x 1" Phillips Truss Head SS

See option KDS on page O-15.30 for additional information
Masonry sleeve anchor
3/8" x 4"

See options EWA, EWANOR, EWAP, EWAT on pages O-15.12,.15,.16,.18 for additional information
Masonry sleeve anchor
3/8" x 5"

See options EWA, EWANOR, EWAP, EWAT on pages O-15,12,.15,.16,.18 for additional information
Masonry sleeve anchor
3/8" x 4" stainless steel

See options EWA, EWANOR on pages O-15.12,.15 for additional information
Masonry sleeve anchor
3/8" x 5" stainless steel

See options EWA, EWANOR on pages O-15.12,.15 for additional information
HARDWARE
LOCATIONS
HARDWARE LOCATION

<table>
<thead>
<tr>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frame location resume</td>
<td>Q-1.1</td>
</tr>
<tr>
<td>Door location resume</td>
<td>Q-1.2</td>
</tr>
<tr>
<td>4 ½” for 1’0” to 3’4”</td>
<td>Q-1.3</td>
</tr>
<tr>
<td>4 ½” for 3’6” to 5’0”</td>
<td>Q-1.4</td>
</tr>
<tr>
<td>4 ½” for 5’2” to 6’4”</td>
<td>Q-1.5</td>
</tr>
<tr>
<td>4 ½” for 6’6” to 7’6”</td>
<td>Q-1.6</td>
</tr>
<tr>
<td>4 ½” for 6’8” to 7’6”</td>
<td>Q-1.7</td>
</tr>
<tr>
<td>4 ½” for 7’8” to 8’2”</td>
<td>Q-1.8</td>
</tr>
<tr>
<td>4 ½” for 8’4” to 8’10”</td>
<td>Q-1.9</td>
</tr>
<tr>
<td>4 ½” for 9’0” to 10’0”</td>
<td>Q-1.10</td>
</tr>
<tr>
<td>4 ½” for dutch 6’8” x 7’2”</td>
<td>Q-1.11</td>
</tr>
<tr>
<td>5” for 1’0” to 3’4”</td>
<td>Q-1.12</td>
</tr>
<tr>
<td>5” for 3’6” to 5’0”</td>
<td>Q-1.13</td>
</tr>
<tr>
<td>5” for 5’2” to 6’4”</td>
<td>Q-1.14</td>
</tr>
<tr>
<td>5” for 6’6” to 7’6”</td>
<td>Q-1.15</td>
</tr>
<tr>
<td>5” for 6’8” to 7’6”</td>
<td>Q-1.16</td>
</tr>
<tr>
<td>5” for 7’8” to 8’2”</td>
<td>Q-1.17</td>
</tr>
<tr>
<td>5” for 8’4” to 8’10”</td>
<td>Q-1.18</td>
</tr>
<tr>
<td>5” for 9’0” to 10’0”</td>
<td>Q-1.19</td>
</tr>
<tr>
<td>5” for dutch 6’8” x 7’2”</td>
<td>Q-1.20</td>
</tr>
</tbody>
</table>
# 4 1/2" hinge and strike location

<table>
<thead>
<tr>
<th>Frame Height</th>
<th>Hinge Size</th>
<th>No. of Hinges</th>
<th>Machining Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>6'6&quot;(78)</td>
<td>4 1/2&quot;</td>
<td>3</td>
<td>7 1/2&quot; 36 7/16&quot; 65 3/8&quot; 40 5/16&quot; 48&quot;</td>
</tr>
<tr>
<td>6'8&quot;(80)</td>
<td>4 1/2&quot;</td>
<td>3</td>
<td>7 1/2&quot; 37 7/16&quot; 67 3/8&quot; 40 5/16&quot; 48&quot;</td>
</tr>
<tr>
<td>6'8&quot;(80)</td>
<td>4 1/2&quot;</td>
<td>4</td>
<td>7 1/2&quot; 27 29/64&quot; 47 13/32&quot; 67 23/64&quot; 40 5/16&quot; 48&quot;</td>
</tr>
<tr>
<td>6'10&quot;(82)</td>
<td>4 1/2&quot;</td>
<td>3</td>
<td>7 1/2&quot; 38 7/16&quot; 69 3/8&quot; 40 5/16&quot; 48&quot;</td>
</tr>
<tr>
<td>6'10&quot;(82)</td>
<td>4 1/2&quot;</td>
<td>4</td>
<td>7 1/2&quot; 28 1/8&quot; 48 3/4&quot; 69 3/8&quot; 40 5/16&quot; 48&quot;</td>
</tr>
<tr>
<td>7'0&quot;(84)</td>
<td>4 1/2&quot;</td>
<td>3</td>
<td>7 1/2&quot; 39 7/16&quot; 71 3/8&quot; 40 5/16&quot; 48&quot;</td>
</tr>
<tr>
<td>7'0&quot;(84)</td>
<td>4 1/2&quot;</td>
<td>4</td>
<td>7 1/2&quot; 28 51/64&quot; 50 3/32&quot; 71 25/64&quot; 40 5/16&quot; 48&quot;</td>
</tr>
<tr>
<td>7'2&quot;(86)</td>
<td>4 1/2&quot;</td>
<td>3</td>
<td>7 1/2&quot; 40 7/16&quot; 73 3/8&quot; 40 5/16&quot; 48&quot;</td>
</tr>
<tr>
<td>7'2&quot;(86)</td>
<td>4 1/2&quot;</td>
<td>4</td>
<td>7 1/2&quot; 29 29/64&quot; 51 13/32&quot; 73 23/64&quot; 40 5/16&quot; 48&quot;</td>
</tr>
<tr>
<td>7'4&quot;(88)</td>
<td>4 1/2&quot;</td>
<td>3</td>
<td>7 1/2&quot; 41 7/16&quot; 75 3/8&quot; 40 5/16&quot; 48&quot;</td>
</tr>
<tr>
<td>7'4&quot;(88)</td>
<td>4 1/2&quot;</td>
<td>4</td>
<td>7 1/2&quot; 30 1/8&quot; 52 3/4&quot; 75 3/8&quot; 40 5/16&quot; 48&quot;</td>
</tr>
<tr>
<td>7'6&quot;(90)</td>
<td>4 1/2&quot;</td>
<td>3</td>
<td>7 1/2&quot; 42 7/16&quot; 77 3/8&quot; 40 5/16&quot; 48&quot;</td>
</tr>
<tr>
<td>7'6&quot;(90)</td>
<td>4 1/2&quot;</td>
<td>4</td>
<td>7 1/2&quot; 30 51/64&quot; 54 3/32&quot; 77 25/64&quot; 40 5/16&quot; 48&quot;</td>
</tr>
<tr>
<td>7'8&quot;(92)</td>
<td>4 1/2&quot;</td>
<td>4</td>
<td>7 1/2&quot; 31 29/64&quot; 55 13/32&quot; 79 23/64&quot; 40 5/16&quot; 48&quot;</td>
</tr>
<tr>
<td>7'10&quot;(94)</td>
<td>4 1/2&quot;</td>
<td>4</td>
<td>7 1/2&quot; 32 1/8&quot; 56 3/4&quot; 81 3/8&quot; 40 5/16&quot; 48&quot;</td>
</tr>
<tr>
<td>8'0&quot;(96)</td>
<td>4 1/2&quot;</td>
<td>4</td>
<td>7 1/2&quot; 32 51/64&quot; 58 3/32&quot; 83 25/64&quot; 40 5/16&quot; 48&quot;</td>
</tr>
<tr>
<td>10'0&quot;(120)</td>
<td>4 1/2&quot;</td>
<td>4</td>
<td>7 1/2&quot; 40 51/64&quot; 74 3/32&quot; 107 25/64&quot; 40 5/16&quot; 48&quot;</td>
</tr>
</tbody>
</table>

**Top to top hinge location**

**Bottom to center strike location**
### 4 1/2" hinge and lock location

![Diagram of hinge and lock location](image)

<table>
<thead>
<tr>
<th>Frame Height</th>
<th>Hinge size</th>
<th>Qt.</th>
<th>Machining Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>6'6&quot;(78)</td>
<td>4 1/2&quot;</td>
<td>3</td>
<td>A: 36 5/16&quot;</td>
</tr>
<tr>
<td>6'8&quot;(80)</td>
<td>4 1/2&quot;</td>
<td>3</td>
<td>A: 37 5/16&quot;</td>
</tr>
<tr>
<td>7'0&quot;(84)</td>
<td>4 1/2&quot;</td>
<td>4</td>
<td>A: 27 21/64&quot;</td>
</tr>
<tr>
<td>7'0&quot;(84)</td>
<td>4 1/2&quot;</td>
<td>3</td>
<td>A: 38 5/16&quot;</td>
</tr>
<tr>
<td>7'4&quot;(88)</td>
<td>4 1/2&quot;</td>
<td>4</td>
<td>A: 39 5/16&quot;</td>
</tr>
<tr>
<td>7'2&quot;(86)</td>
<td>4 1/2&quot;</td>
<td>3</td>
<td>A: 40 5/16&quot;</td>
</tr>
<tr>
<td>7'2&quot;(86)</td>
<td>4 1/2&quot;</td>
<td>4</td>
<td>A: 29 21/64&quot;</td>
</tr>
<tr>
<td>7'4&quot;(88)</td>
<td>4 1/2&quot;</td>
<td>3</td>
<td>A: 41 5/16&quot;</td>
</tr>
<tr>
<td>7'4&quot;(88)</td>
<td>4 1/2&quot;</td>
<td>4</td>
<td>A: 42 5/16&quot;</td>
</tr>
<tr>
<td>7'6&quot;(90)</td>
<td>4 1/2&quot;</td>
<td>4</td>
<td>A: 43 5/16&quot;</td>
</tr>
<tr>
<td>7'6&quot;(90)</td>
<td>4 1/2&quot;</td>
<td>4</td>
<td>A: 44 5/16&quot;</td>
</tr>
<tr>
<td>7'8&quot;(92)</td>
<td>4 1/2&quot;</td>
<td>3</td>
<td>A: 45 21/64&quot;</td>
</tr>
<tr>
<td>7'10&quot;(94)</td>
<td>4 1/2&quot;</td>
<td>4</td>
<td>A: 46 5/8&quot;</td>
</tr>
<tr>
<td>8'0&quot;(96)</td>
<td>4 1/2&quot;</td>
<td>4</td>
<td>A: 47 43/64&quot;</td>
</tr>
<tr>
<td>10'0&quot;(120)</td>
<td>4 1/2&quot;</td>
<td>4</td>
<td>A: 48 43/64&quot;</td>
</tr>
</tbody>
</table>

Top to top hinge location
Bottom to center lock location, based on 3/4" undercut
4 1/2" hinge location for 1'10" to 3'4"

Top to top hinge locations
Bottom to center strike location
4 1/2" hinge location for 3'6" to 5'0"

* = Mid height up to 59 15/16", 40 5/16" for greater than 60"

Top to top hinge locations
Bottom to center strike location
4 1/2" hinge location for 5'2" to 6'4"

Top to top hinge locations
Bottom to center strike location
4 1/2" hinge location for 6'6" to 7'6"

Top to top hinge locations
Bottom to center strike location
4 1/2" hinge location for 6'8" to 7'6"

Top to top hinge locations
Bottom to center strike location
4 1/2" hinge location for 7'8" to 8'2"

Top to top hinge locations
Bottom to center strike location
4 1/2" hinge location for 8'4" to 8'10"

Top to top hinge locations
Bottom to center strike location
4 1/2" hinge location for 9'0" to 10'0"

Top to top hinge locations
Bottom to center strike location
4 1/2" hinge dutch location for 6'8" to 7'2"

Top to top hinge locations
Bottom to center strike location
5" hinge location for 1'10" to 3'4"

Top to top hinge locations
Bottom to center strike location
5" hinge location for 3'6" to 5'0"

* = Mid height up to 59 15/16", 40 5/16" for greater than 60"

Top to top hinge locations
Bottom to center strike location
5" hinge location for 5’2" to 6’4"

Top to top hinge locations
Bottom to center strike location
5" hinge location for 6'6" to 7'6"

7'-6" (90")  7'-4" (88")  7'-2" (86")  7'-0" (84")  6'-10" (82")  6'-8" (80")  6'-6" (78")

Top to top hinge locations  
Bottom to center strike location
5" hinge location for 6'8" to 7'6"

Top to top hinge locations
Bottom to center strike location
5" hinge location for 7'8" to 8'2"

Top to top hinge locations
Bottom to center strike location
5" hinge location for 8'4" to 8'10"

Top to top hinge locations
Bottom to center strike location

Optional strike location
Optional lock location
5" hinge location for 9'0" to 10'0"

Top to top hinge locations
Bottom to center strike location
5" hinge dutch location for 6'8" to 7'2"

Top to top hinge locations
Bottom to center strike location
INSTALLATION
INSTALLATION

Knocked down drywall frame.................................................................R-1.1
Masonry frame page 1 ...........................................................................R-1.2
Masonry frame page 2 ..........................................................................R-1.3
Steel framing ....................................................................................R-1.4
4 sided knocked down borrowed lite ....................................................R-1.5
Knock down double egress frame .......................................................R-1.6
Glass sizes in elevation ......................................................................R-1.7
Glass sizes in door ............................................................................R-1.8
Handing chart ..................................................................................R-1.9
Panel ..................................................................................................R-1.10
Knocked down drywall frame

1. Build wall with rough opening height equal to nominal door opening:
   - height plus 1 ¼”
   - width plus 2”

2. Install jamb at angle, and let the top of the jamb rest against the opening close to the top.

3. Insert frame head under the corner clips of the jamb and raise into position.

4. Retract leveling anchor in the jamb and finish installing it in position on wall.

5. Insert the corner clips of the opposite jamb into the opposite end of the head and position jamb on wall.

6. After the two vertical jambs are installed with the frame head, measure diagonally from upper left to lower right corner, and from upper right to lower left corner and make sure that “X” dimensions are identical. Install base anchor screws through countersunk holes in frame face or DSA straps and floor plate.

7. Square top of frame and tighten leveling bracket. (Do not overtighten)

8. For cased open KD frames, the rough opening size is equal to finished opening:
   - height plus 1 ¼”
   - width plus 2 ¾”.
Masonry frame

1. Bracing the frame:
   Brace the frame as shown in Figure #1. Do not brace in the direction of intended wall.

2. Plumbing the frame:
   The contractor should have a carpenter level, square and spreader, Figure #2.
   Set the frame in the desired location and level the header.
   If necessary shim under jamb floor anchor, Figure #2a, or equalize them through an adjustable floor anchor.
   With frame on line, set the spreader and fasten jambs to the floor through floor anchors.

3. Spreader:
   The typical wood spreader, Figure #3, must be square and fabricated from lumber not less 1” (25.4mm) thick.
   The correct length is the door opening width between the jambs at the header.
   Cut clearance notches for frame stops.
   Spreader must be nearly as wide as frame depth for proper installation.
   Do not remove spreaders until the frame is set permanently in the wall.
Masonry frame

4. The temporary spreaders often welded to the base of the jambs of frame with welded corners, ARE NOT intended to be used during the installation of the frame into the wall. These temporary spreaders are used to prevent shipping damages only.

A second wood spreader at the mid or strike point the frame, Figure #4, must be used in addition to the one at the base of the frame to maintain a proper door opening and to prevent bowing the jambs.

5. WMA, Wire masonry Anchor is normally used on custom frames. The metallic wire must be adjusted at the job site in function of the throat.

The TMA, “T” Masonry Anchor provides total adjustability and is normally made to fit a particular type of frame profile.
Door and borrowed light openings should be rough-framed with steel studs and runners. Position floor to ceiling height strut-studs vertically. Adjacent to frames, and anchor securely to top and bottom runners with 5/8” type S-12 Low profile head screws. Where heavy or oversize doors are used, install an additional strut-stud at jambs. Fabricate sill and header sections from steel runners and install over, less than ceiling height door frame, and above and below borrowed light frames, fabricate from a section of runner cut to length approx. 6” longer than rough opening. Slit flanges and bend web to allow attachment to adjacent vertical strut-studs. Securely attach through web to strut-stud with 5/8” type S-12 Low profile head screws.
4 sided knocked down frame

1. You have to open jamb throat by hand, to pass over the jamb depth.
2. The base of frame must be raised $\frac{1}{2}''$ to be able to properly adjust the header and this should be done with your leveling screw.
3. Construct wall with rough opening equal to finished opening height and width plus 2”.
4. Standard construction, knocked down with screws, compression pads at each ends of each components.
Double egress knocked down frame

Rough Opening for 1 3/8"-2 5/8" face jambs:
- Opening width + 2 1/4" = Rough Opening dimension
- Opening height + 3/4" = Rough Opening dimension

Rough Opening for 2"-3 1/4" face jambs:
- Opening width + 3 1/4" = Rough Opening dimension
- Opening height + 11/4" = Rough Opening dimension

For more installation information see
Double egress knocked down frame

Rough Opening for 1 3/8"-2 5/8" face jambs:
- Opening width + 2 1/4" = Rough Opening dimension
- Opening height + 3/4" = Rough Opening dimension

Rough Opening for 2"-3 1/4" face jambs:
- Opening width + 3 1/4" = Rough Opening dimension
- Opening height + 11/4" = Rough Opening dimension

For more installation information see
Glass sizes in elevation

Standard single rabbet

Centered glass

Standard double rabbet

Actual glass sizes:
opening dimension – 1/4” in height and width
Glass sizes in door

DLF flush kit

Full flush seamless kit

Sandwich lite kit

Actual glass sizes:

exposed glass + 1” in height and width
Handing chart

Single Doors

INSIDE

RH
Right Hand

LH
Left Hand

INSIDE

RHR
Right Hand Reverse

LHR
Left Hand Reverse

Pair of Doors

INSIDE

RHA
Right Hand Active

LHA
Left Hand Active

INSIDE

RHRA
Right Hand Reverse Active

LHRA
Left Hand Reverse Active

RHR/RHR
Double Egress

LHR/LHR
Double Egress
Panel

Removable

18° C/C

3/8" long

1/4" typ.

Screwed

glazing tape 1/2" x 1/16"

Fixed with beads

Note: may require special profile depending on panel thickness.

Notice: panels will received top and bottom channels not sealed independently of method of installation.