HOLLOW METAL DOORS AND FRAMES

TECHNICAL INFORMATION

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Product Technical Information
IDC Hollow Metal Doors and Frames

Index

General
Onsite storage TDD 1
Care of finished product TDD 2
LEED TDD 3
Warranty TDD 4
Certificate of Origin/ARRA TDD 5

Doors
Introduction TDD 1
Steel Stiffened door TDD 1
Polystyrene door TDD 2
Urethane (Polyiso) door TDD 2A
Embossed panel door TDD 3
Stainless steel door TDD 4
Door hinge reinforcement TDD 5
Door lock reinforcement TDD 6
Fire-rated doors TDD 7
Door glazing trim TDD 8
Door elevations TDD 9
Door louver TDD 10
Door reinforcing gauges TDD 11
Door edge construction TDD 12
Door closing channels TDD 13
Physical endurance test data TDD 14
Physical endurance test data TDD 14A
Weep hole TDD 15

Frames
Introduction TDF 1
Drywall frame TDF 1
Knock down frame TDF 1A
Two-piece split frame TDF 2
Double egress frame TDF 3
Standard welded corner TDF 4
Frame hinge reinforcement TDF 5
Frame strike reinforcement TDF 6

continued...
Index continued

Frames

Fire-rated door frames TDF 7
Fire-rated glazed frames TDF 8
Frame glazing bead TDF 9
Frame muntin TDF 10
Frame reinforcing gauges TDF 11
Frame anchors TDF 12
Removable hollow metal mullion TDF 13
Removable transom bar TDF 14
Frame installation- masonry wall TDF 15
Frame installation- pressure-fit TDF 16
Frame installation- stud wall TDF 17
Frame installation- existing wall TDF 18
KD frame assembly TDF 19
STORAGE INSTRUCTIONS
All wraps and covers shall be removed from doors and frames upon receipt at the jobsite or storage facility. Any scratches or abrasions received during shipping and handling are to be promptly cleaned and repainted with a rust inhibitive primer. All material must be stored on planks or dunnage in a dry location. Doors shall be stored in a vertical position with blocking and frames shall be stored with blocking as shown in the diagrams. If material is covered during storage, ample air circulation must be provided between units. Failure to follow these instructions may result in deterioration of the shop primer resulting in corrosion of the steel. See IDC technical publication TDG 2 for additional information.
CARE OF PRIME PAINTED STEEL

GENERAL:
IDC doors and frames are designed to meet the requirements of ANSI A250.8. Products receive a factory applied primer. The primer has been tested and certified to meet the passing criteria set forth in ANSI A250.10 Test Procedure and Acceptance Criteria for Prime Painted Steel Doors and Frames.

SURFACE PREPARATION:
In order to ensure proper prime paint adhesion, all IDC steel doors and frames are pretreated prior to the application of the prime paint. All exposed surfaces are thoroughly cleaned and phosphatized during the critical pretreatment process.

PRIMERS:
After proper surface preparation, IDC doors and frames shall be finished with one coat of factory baked-on, rust inhibitive primer. The primer is applied to all visible/exposed surfaces of the products in accordance with ANSI A250.10 Test Procedure and Acceptance Criteria for Prime Painted Steel Doors and Frames.

IDC primer test results are as follows:
- Salt Spray: 120 Hours
- Humidity: 240 Hours
- Impact: Passed
- Adhesion: Passed

FIELD PROCEDURES:
The high grade baked-on prime paint furnished on IDC doors and frames provides high quality protection against corrosion and abrasion. It provides an excellent base for finish paint applications. The primer itself is not finish paint and requires finish painting in the field. All surface damage must be repaired and reprimed with a compatible rust inhibitive primer prior to applying the finish paint. All surfaces must be thoroughly cleaned prior to finish painting.

Application of finish paint shall be in accordance with the paint manufacturer's recommendations. Curing times vary with the type of paint used and are influenced by atmospheric conditions. Avoid using lacquer thinner or other solvents as they may have an adverse reaction upon the primer. Some types of finish paint require repriming of all previously primed surfaces.

STORAGE:
Proper storage and handling procedures are essential in ensuring that factory primed surfaces are ready to receive finish paint. Upon receipt at the jobsite or storage facility, all doors and frames must be thoroughly inspected. All wrapping material is to be removed. Abrasions or scratches received during shipping and handling are to be sanded, cleaned and repainted with a rust inhibitive primer.

Material must be stored on planks or dunnage in a dry location. Doors and frames shall be stored in a vertical position and spaced by blocking. See IDC technical publication TDG 1 for additional information. If material is covered during storage, ample air circulation must be provided between units.

NOTE: Paint manufacturers advise that primed doors and frames should receive a finish coat of paint within 30 days of delivery. Surfaces must be sanded, cleaned and touched up prior to finish painting.*

Failure to follow the instructions and procedures herein may create conditions that will permit deterioration of the shop primer, resulting in corrosion of the steel.

*Ref. HMMA 840-07 GUIDE SPECIFICATION FOR INSTALLATION AND STORAGE OF HOLLOW METAL DOORS AND FRAMES
LEED Rating System

The USGBC (U.S. Green Building Council) has created the LEED (Leadership in Energy and Environmental Design) Green Building Rating System New Construction (NC), Core and Shell (CS), Schools (S) and Commercial Interiors (CI). The LEED Rating System establishes the criteria for what constitutes a "green building". The intent of the system is to establish guidelines to ensure attention is given to utilization of natural resources, site selection, site preparation, site development, pollution and building materials selection.

Section MR 4.1 & MR 4.2 Materials and Resources- Recycled Content LEED NC, CS, S, CI
LEED MR 4.1 states the minimum requirement is 10% and MR 4.2 is 20%. Steel used by IDC exceeds these requirements. The recycled content value of a material assembly is determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value. Doors and frames from IDC contain recycled content and contribute toward this credit.

Section MR 5.1 Local/Regional Materials
Contact factory for specific information regarding L/R Materials

No measurable latent VOC emissions exist in products at the time of shipping. This is not applicable to products receiving factory applied bituminous back coating. There is no lead or mercury contained in the packaging of products manufactured by IDC.

Individual building products are not certified as being LEED compliant, only buildings. However, products manufactured by MPI are LEED compliant as far as being within the parameters of the LEED Rating System as it relates to recycled content.*

Specification sheets, material safety data information and/or confirmation letters from our suppliers are on file. Copies are available upon request.

*Statement is based on careful evaluation of the referenced rating system as it applies to the products by International Door Closers, Inc. This information has no implied warranty or merchantability or implied warranty of fitness for a particular purpose or any other warranty, expressed or implied. This statement is for general information. Contact factory for job specific information and for possible credits for Local/Regional materials.
Warranty

Seller warrants only to its distributors, other direct buyers for resale and other direct buyers for commercial and industrial use that it will, at its option and sole discretion, furnish, F.O.B. Corbin, Kentucky, a replacement for repair or refund the purchase price to such buyer of any goods of its manufacture or part or portion thereof proved to its satisfaction to be defective in workmanship or material under normal use and service within one year (365 days) from the date of delivery to such distributor or such direct buyer, provided notice of such defect is given to seller within such one year (365 days) period. Our obligation will also terminate at any time anyone other than our company performs any work or repair, service or replacement on the item without our prior written consent. This warranty excludes products that are abused, misused, improperly installed or installed in a location other than that for which specified.

There is no implied warranty of merchantability or implied warranty of fitness for a particular purpose or any other warranty, express or implied, and seller will not be responsible for any damages whatsoever, or for any labor, transportation or other costs or expenses relating to such replacement or such repair, including any indirect, incidental or consequential damages.

INTERNATIONAL DOOR CLOSERS, INC
Nashville, TN 37210
Anaheim, CA 92807

Manufacturer's Standard Warranty
AMERICAN MADE

CERTIFICATE OF ORIGIN and ARRA STATEMENT

This is to certify that the steel used in manufacturing hollow metal doors and frames is acquired from mills located in the United States of America.

All doors and frames are designed and manufactured at a facility located in Corbin, Kentucky United States of America.

Products manufactured are in compliance with Section 1605 of the American Recovery and Reinvestment Act of 2009 as it relates to goods produced in the United States.
HOLLOW METAL DOORS

- IDC custom doors are manufactured to the highest industry standards with many features exceeding the minimum requirements set forth in those standards.

- Fabrication is in accordance with HMMA 860, HMMA 861 and ANSI-A250.8.

- IDC doors have been tested and certified as exceeding by three million cycles the endurance performance testing prescribed by ANSI A250.4 for Level A doors.

- Doors are available with steel-stiffened internal construction or with closed cell polystyrene core. Face sheets are manufactured from cold-rolled steel, A60 galvannealled, G90 zinc-coated or stainless steel.

- Fire ratings are available for all door types up to and including 3 hour A-label in positive pressure in accordance with UBC 7-2 and UL 10C.

- IDC is constantly seeking ways to improve products. Changes in design and specifications are made from time to time in order to implement these improvements. IDC reserves the right to do so without notice and without obligation to incorporate such changes to any product previously manufactured.
2.5 lb density mineral fiber (12 lb at temperature rise) between stiffeners

Vertical edges tack welded and finished smooth standard. Continuously welded or open seam available.

Steel Stiffened Door
Vertically Steel Stiffened Hollow Metal Door

Conforms to HMMA 861
Polystyrene Door

Conforms to HMMA 867
Laminated Core Hollow Metal Door

POLYSTYRENE CORE
U FACTOR .156, R FACTOR 6.4
RIGID PRE-FORMED CLOSED CELL BOARD
1 LB. PCF DENSITY MINIMUM
CONFORMS TO ASTM C578, TYPE 1

VERTICAL EDGES TACK WELDED
AND FINISHED SMOOTH STANDARD.
CONTINUOUSLY WELDED OR OPEN
SEAM AVAILABLE.
Conforms to HMMA 867
Laminated Core Hollow Metal Door

Polyiso Door

POLYISOCYANURATE CORE
R VALUE 10.0, U VALUE .100
RIGID PRE-FORMED CLOSED CELL BOARD
2 LB./FT³ DENSITY AVG.
CONFORMS TO ASTM D2856

VERTICAL EDGES TACK WELDED
AND FINISHED SMOOTH STANDARD.
WELDED OR OPEN SEAM AVAILABLE.

DETAIL
INTERLOCKING
EDGE
Conforms to HMMA 867
Laminated Core Hollow Metal Door

Available Sizes:
3'-0", 3'-2", 3'-4", 3'-6" x 7'-0" 18 gauge, A60

Polystyrene Core
(U Factor- .156) (R Factor- 6.4)
Rigid, Pre-Formed Closed Cell Board,
1 LB. PCF Density (Minimum). Conforms
To ASTM C578, Type1

Fire Rated Up To 3 Hours- Pairs and Singles
Consult Factory for Details

Embossed Panel Doors

IDC Technical
Door face sheets shall be manufactured from [Type 304] [Type 316] stainless steel conforming to ASTM A 666. Finish shall be #4 Satin. Door edges shall be joined by a continuous interlocking seam the full height of the door (lock seam), resulting in a visible vertical seam at both edges of the door.

Internal Construction:
Steel Stiffened: The door shall be stiffened by continuous vertically formed steel sections which, upon assembly, shall span the full thickness of the interior space between door faces. These stiffeners shall be 0.026 in. (0.6 mm) minimum thickness, spaced so that the vertical interior webs shall be no more than 6 in. (152 mm) apart and securely fastened to both face sheets by welds spaced a maximum of 5 in. (127 mm) o.c. vertically. Spaces between stiffeners shall be filled with fiberglass or mineral rock wool batt-type material. Stiffeners shall be [Type 304 stainless steel] [Type 316 stainless steel] Laminated Core: Door face sheets shall be stiffened by a polystyrene foam core that is laminated with adhesive under pressure between the face sheets. Polystyrene core is rigid, pre-formed closed cell board, 1 lb. density minimum in accordance with ASTM C578, Type 1.
REINFORCEMENT IS PROJECTION WELDED TO DOOR WITH A MINIMUM OF SIX WELDS PER BRACKET PLUS AN ADDITIONAL TACK WELD AT EACH END, MIN. 1/4" LONG
HEAVIER GAUGES AND FULL HEIGHT ALSO AVAILABLE

Door Hinge Reinf.
Door Lock Reinf.

Cylindrical Lock
16 Gauge (0.053) Box Reinf.

Mortise Lock
11 Gauge (0.108) Tab Reinf.
## ALL DOORS RECEIVE UNDERWRITERS LABORATORIES LISTING MARK

<table>
<thead>
<tr>
<th>DOOR DESCRIPTION</th>
<th>RATING</th>
<th>MAXIMUM DOOR OPENING SIZES</th>
<th>250° TEMP. RISE</th>
<th>PAIR SWING</th>
<th>14 GAUGE</th>
<th>18 GAUGE</th>
<th>LATCH THROW</th>
<th>LOCKSET</th>
<th>FIRE EXIT HARDWARE</th>
<th>CONCEALED VERT. ROD</th>
<th>SURFACE VERT. ROD</th>
<th>OPEN BACK STRIKE</th>
<th>FLUSH BOLTS</th>
<th>WITH ASTRAGAL (1/2 HR)</th>
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<tbody>
<tr>
<td>BASIC FIRE DOOR</td>
<td></td>
<td>4'0&quot;x8'0&quot; 4'0&quot;x10'0&quot; 8'0&quot;x10'0&quot; 8'0&quot;x8'0&quot;</td>
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<tr>
<td>DOUBLE EGRESS</td>
<td></td>
<td>8'0&quot;x10'0&quot;</td>
<td>* * * * 1/2 * *</td>
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<td>STAINLESS STEEL</td>
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<td>4'0&quot;x10'0&quot;</td>
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<tr>
<td>DUTCH DOOR</td>
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<td>3'6&quot;x7'6&quot;</td>
<td>* * * * 1/2 * *</td>
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<tr>
<td>LOUVERED DOORS</td>
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<tr>
<td>LEAD-LINED DOORS</td>
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<td>4'0&quot;x8'0&quot;</td>
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<tr>
<td>POSITIVE PRESSURE</td>
<td></td>
<td>4'0&quot;x10'0&quot;</td>
<td>* * * * 1/2 * *</td>
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<tr>
<td>UBC 7-2 &amp; UL 10C</td>
<td></td>
<td>6'0&quot;x10'0&quot;</td>
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Basic fire doors, double egress and stainless steel doors are available with prep for ceramic glazing as follows:

- 3 Hour "A" label- Max. exposed glass up to 100 in². (No dimension shall exceed 33")
- 1½ Hour "B" label- Half glass up to 36"x56" or 2031 in² max.
- 1 Hour "B" label, ¾ Hour "C" label or 20 minute- Full glass up to 36"x89" or 3204 in² max.

* Min. width

Notes:
1. Max. louver size 24"x24"
2. Max. 8'0"x7'2" 1 1/2 Hour with OBS
3. Includes Double Egress and Stainless Steel Doors
4. Up to 8'0"x8'0" Polystyrene Pair 3 Hr-"A" Label

The intent of this chart is to provide general information only. All information subject to change, consult factory for latest information and specific data pertaining to individual job requirements.
Door Glazing Trim

For glazing up to 1/2" thick

Custom sizes and trim designs for other thicknesses also available

For fire-rated doors with glazing exceeding 1/2" thick

Contact factory for additional information
Vision lite and louver sizes as specified.
See IDC technical publications TDD 8 and TDD 10 for additional information.
Standard Door Louver
Sight Proof
Louver gauge and material as specified
Blades tenoned to a 16 gauge channel surround
Louver assembly is welded to inside of door
No overlapping trim
30% - 35% Free air flow
All reinforcement meets or exceeds the minimum requirements of Underwriters Laboratories, ANSI A250.6, ANSI A250.8 and HMMA 860/HMMA 861. This information is for reference only. Please contact the factory for hardware types not shown and for information pertaining to metric equivalents and gauge thickness.

<table>
<thead>
<tr>
<th>HARDWARE ITEM</th>
<th>MIN. GAUGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortise Locks &amp; Deadbolts</td>
<td>0.108</td>
</tr>
<tr>
<td>Bored or Cylindrical Locks</td>
<td>0.108/0.053</td>
</tr>
<tr>
<td>Flush Bolts</td>
<td>0.108</td>
</tr>
<tr>
<td>Surface Bolts</td>
<td>0.093</td>
</tr>
<tr>
<td>Surface Closers</td>
<td>0.067</td>
</tr>
<tr>
<td>Surface Applied Holders/Stops</td>
<td>0.067</td>
</tr>
<tr>
<td>Pull Plates/Bars</td>
<td>0.067</td>
</tr>
<tr>
<td>Surface Applied Exit Devices</td>
<td>0.067</td>
</tr>
<tr>
<td>Pivots</td>
<td>0.167</td>
</tr>
<tr>
<td>Hinges (1(\frac{3}{8})&quot; Doors)</td>
<td>0.167</td>
</tr>
<tr>
<td>Hinges (1(\frac{3}{4})&quot; Doors)</td>
<td>0.167</td>
</tr>
</tbody>
</table>
Door Edge Construction

OPEN EDGE SEAM

SEAMLESS EDGE (STANDARD)
MAY BE TACK WELDED AND FINISHED SMOOTH OR CONTINUOUSLY SEAM WELDED AND FINISHED SMOOTH
APPLICABLE TO ALL DOOR CORE TYPES

DETAIL INTERLOCKING EDGE (SQUARE OR BEVELED)

PLUG WELD HOLE AND FINISH SMOOTH
WELDS LOCATED NEAR THE TOP AND BOTTOM OF DOOR AND ABOVE AND BELOW EACH HINGE OR LOCK CUTOUT
MAY ALSO HAVE ADDITIONAL WELDS BETWEEN CUTOUTS
APPLICABLE TO ALL DOOR CORE TYPES
DOOR END CHANNEL (TOP AND BOTTOM)
PROJECTION WELDED TO BOTH FACES
MINIMUM 16 GA. (0.053) STANDARD
INVERT CHANNEL WHEN CLOSED TOP/BOTTOM REQUIRED
MAY BE SEALED WEATHER TIGHT
A typical steel stiffened door was tested by Intertek Testina Services in conjunction with the HMMA division of NAAMM. The cyclical operation and comprehensive twist tests indicated in the specification provided the endurance portion of the test. Four million cycles of opening and closing the door were performed thereby exceeding the minimum requirement of ANSI A250.8 level 3 and 4 doors by three million cycles.

ITS Test Report: WHI-495-SP-0631
A typical polystyrene core door was tested for IDC by Intertek Testing Services. The cyclical operation and comprehensive twist tests indicated in the specification provided the endurance portion of the test.

One million cycles of opening and closing the door were performed in accordance with ANSI Standard A250.4. The test results indicate the IDC door exceeded the minimum requirements set forth by the standard for Level A doors and meet all criteria for acceptance.

ITS Test Report: 3195456MID-002
3/4" D. WEEP HOLE LOCATED IN THE CENTER OF BOTTOM DOOR CHANNEL
HOLLOW METAL FRAMES

- IDC custom frames are manufactured to the highest industry standards with many features exceeding the minimum requirements set forth in those standards.
- Fabrication is in accordance with HMMA 860, HMMA 861 and ANSI-A250.8.
- Frames are available with standard face welded corners, full profile weld or knock down for field assembly.
- Frames are manufactured from cold-rolled steel, A60 galvannealled, G90 zinc coated or stainless steel.
- Fire ratings are available for most frame types up to and including 3 hour A-label in positive pressure in accordance with UBC 7-2 and UL 10C.
- IDC is constantly seeking ways to improve products. Changes in design and specifications are made from time to time in order to implement these improvements. MPI reserves the right to do so without notice and without obligation to incorporate such changes to any product previously manufactured.
FRAME IS SIZED TO FIT EXISTING ROUGH OPENING. TYPICALLY, A NEW ROUGH OPENING SHOULD BE 1" TO 1 1/4" WIDER ON EACH SIDE THAN THE ACTUAL DOOR OPENING WIDTH AND 1" TO 1 1/2" TALLER THAN THE DOOR OPENING HEIGHT. AVAILABLE AS FIRE-RATED UP TO 1 1/2 HOUR. SEE MPI TECHNICAL PUBLICATIONS TDF 7 AND TDF 16 FOR ADDITIONAL INFORMATION.
Knock Down Frame

For field assembly, internal and external alignment tabs are bent over. Frame is squared and plumbed in the opening prior to attaching to studs or wall. See MPI technical publications TDF 15, TDF 17, TDF 18 and TDF 19 for additional information.
Two-piece Split Frame

INSTALLS IN EXISTING WALL OPENING

MINIMUM 16 GAUGE (0.053)

FRAME CORNERS ARE FULLY WELDED

NO ANCHORS ARE REQUIRED

AVAILABLE AS A DOOR FRAME OR AS FOUR-SIDED WINDOW FRAME

FIRE-RATED DOOR FRAMES AVAILABLE
SEE MPI TECHNICAL PUBLICATION TDF 7 FOR ADDITIONAL INFORMATION
The double egress profile allows a pair of doors, that have the same handing, to swing in opposite directions out of the opening. In order for doors to align properly in the closed position, they must hang in the exact center of the frame jamb depth.

Double egress frames are available for any wall type and can be fire-rated up to three hours. See IDC technical publication TDF 7 for additional information.
Standard Factory Corner Weld

Tack weld @ corner tabs
Tack weld @ corner
Tack weld @ stop

Full weld @ backbend

Faces continuously welded and finished smooth

FULL PROFILE WELD ALSO AVAILABLE.

FRAMES CAN BE MANUFACTURED WITH FULL SAW-CUT MITERED CORNERS.
Frame Hinge Reinforcement

REINFORCEMENT IS PROJECTION WELDED TO FRAME WITH A MINIMUM OF SIX WELDS PER BRACKET

HEAVIER GAUGES, FULL WIDTH, FULL HEIGHT AND FULL WIDTH/FULL HEIGHT ALSO AVAILABLE
REINFORCEMENT TABS ARE PROJECTION WELDED TO FRAME WITH A MINIMUM OF THREE WELDS PER TAB

HEAVIER GAUGES AVAILABLE

Frame Strike Reinforcement
**ALL FRAMES RECEIVE UNDERWRITERS LABORATORIES LISTING MARK**

<table>
<thead>
<tr>
<th>FRAME DESCRIPTION</th>
<th>RATING</th>
<th>3 HOUR CLASS A</th>
<th>11/2 HOUR CLASS B &amp; D</th>
<th>3/4 HOUR CLASS C &amp; E</th>
<th>MAXIMUM DOOR OPENING SIZES</th>
<th>SINGLE SWING</th>
<th>PAIR SWING</th>
<th>12 GAUGE (0.093)</th>
<th>14 GAUGE (0.067)</th>
<th>16 GAUGE (0.053)</th>
<th>WALL</th>
<th>MAXIMUM DOOR OR GLASS OPENING SIZE</th>
<th>MAXIMUM TRANSOM OPENING SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>THREE SIDED FRAMES (1)</td>
<td>* * * *</td>
<td>4'0x10'0</td>
<td>*</td>
<td>*</td>
<td>8'0x10'0</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>3'6x7'2</td>
</tr>
<tr>
<td>DOUBLE EGRESS FRAMES</td>
<td>* * *</td>
<td>8'0x10'0</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
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<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>TRANSOM FRAME WITH BAR 13/4&quot; PANEL</td>
<td>* * *</td>
<td>3'6x11'0</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
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<td>*</td>
<td>*</td>
</tr>
<tr>
<td>TRANSOM FRAME WITH BAR SANDWICH PANEL</td>
<td>* * *</td>
<td>7'0x10'0</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
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<td>*</td>
<td>*</td>
</tr>
<tr>
<td>TRANSOM FRAME NO BAR 13/4&quot; PANEL</td>
<td>* * *</td>
<td>4'0x11'4</td>
<td>*</td>
<td>*</td>
<td>*</td>
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<td>*</td>
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<td>*</td>
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<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>MULTI-SWING DOOR FRAME</td>
<td>* *</td>
<td>12'0x8'0</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>THREE SIDED TWO PIECE FRAME</td>
<td>* *</td>
<td>4'0x10'0</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>THREE SIDED FRAME POSITIVE PRESSURE UBC 7-2 &amp; UL 10C (2)</td>
<td>* *</td>
<td>4'0x10'0</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
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<td>*</td>
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<td>*</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

Refer to IDC technical publication TDF 8, Fire Rated Frames With Glass, for additional information.

**Notes:**
1. KDPF 4'0x8'0 max. for single door openings and 8'0x8'0 max. for double door openings
   Max 1 1/2 hour rating
   KDPF not available in stainless steel
2. Includes double egress frames

The intent of this chart is to provide general information only. All information subject to change, consult factory for latest information and specific data pertaining to individual job requirements.

**Fire Rated Door Frames**

**IDC Technical**
## FIRE RATED FRAMES WITH GLASS

<table>
<thead>
<tr>
<th>RATING</th>
<th>FRAME TYPE</th>
<th>MAX O/A SIZE- ANY ANCHOR</th>
<th>MAX O/A SIZE- MAS ANCHOR</th>
<th>MAX GLASS DIM</th>
<th>in.²</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 minute*</td>
<td>Sidelight with ¼&quot; glazing</td>
<td>13'-6&quot; 12'-0&quot;</td>
<td>13'-6&quot; 12'-0&quot;</td>
<td>101½&quot; 101½&quot; 3831**</td>
<td></td>
</tr>
<tr>
<td>20 minute*</td>
<td>Window with ¼&quot; glazing</td>
<td>13'-6&quot; 12'-0&quot;</td>
<td>13'-6&quot; 12'-0&quot;</td>
<td>109¾&quot; 109¾&quot; 5286</td>
<td></td>
</tr>
<tr>
<td>¾ hr- &quot;C&quot;</td>
<td>Sidelight with ¼&quot; glazing</td>
<td>12'-10&quot; 11'-4&quot;</td>
<td>13'-6&quot; 12'-0&quot;</td>
<td>54&quot; 54&quot; 1296</td>
<td></td>
</tr>
<tr>
<td>¾ hr- &quot;C&quot;</td>
<td>Window with ¼&quot; glazing</td>
<td>8'-0&quot; 10'-0&quot;</td>
<td>12'-0&quot; 11'-4&quot;</td>
<td>33&quot; 48&quot; 1296</td>
<td></td>
</tr>
<tr>
<td>1 hr- &quot;B&quot;</td>
<td>Sidelight with specialty glazing</td>
<td>10'-2&quot; 10'-1&quot;</td>
<td>10'-2&quot; 10'-1&quot;</td>
<td>54&quot; 77¾&quot; 2721***</td>
<td></td>
</tr>
<tr>
<td>1 hr- &quot;B&quot;</td>
<td>Window with specialty glazing</td>
<td>8'-0&quot; 10'-0&quot;</td>
<td>12'-0&quot; 11'-4&quot;</td>
<td>95&quot; 95&quot; 3325***</td>
<td></td>
</tr>
<tr>
<td>1½ hr- &quot;B&quot;</td>
<td>Sidelight with specialty glazing</td>
<td>10'-2&quot; 10'-1&quot;</td>
<td>10'-2&quot; 10'-1&quot;</td>
<td>46½&quot; 56½&quot; 2627***</td>
<td></td>
</tr>
<tr>
<td>1½ hr- &quot;B&quot;</td>
<td>Window with specialty glazing</td>
<td>8'-0&quot; 10'-0&quot;</td>
<td>12'-0&quot; 11'-4&quot;</td>
<td>46½&quot; 56½&quot; 2627***</td>
<td></td>
</tr>
</tbody>
</table>

SPECIALTY GLAZING IS ANY UL LISTED GLAZING MATERIAL- See individual manufacturer data for glazing limitations

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Total area of exposed glass per glass opening cannot exceed the in.² shown.
All anchors must be IDC standard UL approved types.
Sloped head permitted at 20 minute rated frames. (Max overall size 13'-2" x 11'-7")
Segmented radius permitted at 20 minute sidelight frames.
Minimum ¾ stop height at ¾ hr- "C" window frames with more than 500 in.² exposed glass.
Double glazing permitted at ¾ hr- "C" frames- ¼" rated glass one rabbet and ¾" non-rated one rabbet.
Segmented radius frames and multi-angled corner frames are available with rating up to ¾ hr- "C" label.
Consult factory for additional information and other limitations.
All glazing material by others. Glazing bead by IDC.
See IDC technical publication TDF 7, Fire Rated Door Frames, for additional information.
Frame Glazing Bead

5/8" x 5/8" x 0.042 (MINIMUM) CHANNEL GLAZING BEAD WITH #8 TEK SCREWS SPACED A MAXIMUM 10" O.C. CERTAIN FIRE RATED APPLICATIONS REQUIRE 3/4" X 3/4" GLAZING BEAD.

FOR GLASS UP TO 1" THICK

CUSTOM SIZES AND FRAME DESIGNS FOR OTHER THICKNESSES ALSO AVAILABLE

CONTACT FACTORY FOR ADDITIONAL INFORMATION
MUNTIN DESIGNED FOR GLAZING MATERIAL UP TO 1/4"
CUSTOM MUNTINS AVAILABLE FOR THICKER GLAZING
CONTACT FACTORY FOR ADDITIONAL INFORMATION

Frame Muntin
All reinforcement meets or exceeds the minimum requirements of Underwriters Laboratories, ANSI A250.6, ANSI A250.8 and HMMA 860/HMMA 861. This information is for reference only. Please contact the factory for hardware types not shown and for information pertaining to metric equivalents and gauge thickness.

<table>
<thead>
<tr>
<th>HARDWARE ITEM</th>
<th>MIN. GAUGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortise Locks &amp; Deadbolts</td>
<td>0.108</td>
</tr>
<tr>
<td>Bored or Cylindrical Locks</td>
<td>0.108</td>
</tr>
<tr>
<td>Flush Bolts</td>
<td>0.108</td>
</tr>
<tr>
<td>Surface Bolts</td>
<td>0.108</td>
</tr>
<tr>
<td>Surface Closers</td>
<td>0.093</td>
</tr>
<tr>
<td>Surface Applied Holders/ Stops</td>
<td>0.093</td>
</tr>
<tr>
<td>Concealed Holders/ Stops</td>
<td>0.093</td>
</tr>
<tr>
<td>Surface Applied Exit Devices</td>
<td>0.093</td>
</tr>
<tr>
<td>Pivots</td>
<td>0.167</td>
</tr>
<tr>
<td>Hinges</td>
<td>0.167</td>
</tr>
</tbody>
</table>
Frame Anchors

MASONRY ANCHOR (MAS)
MASONRY WIRE ANCHOR (MWA)
MASONRY T-ANCHOR (MTA)

METAL STUD ANCHOR (MSA)
WOOD STUD ANCHOR (WSA)

EXISTING WALL ANCHOR (EMA)

MULL BASE ANCHOR (MBA)
WELDED FLOOR CLIP (WFC)

16 GA. MINIMUM
7 GA. MINIMUM
16 GA. MINIMUM
16 GA. MINIMUM
16 GA. MINIMUM
16 GA. MINIMUM
12 GA. MINIMUM
16 GA. MINIMUM
Removable Hollow Metal Mullion

- Removable Hollow Metal Mullion
  - 12 GA. (0.093) CHANNEL WELDED TO FRAME HEADER
  - 12 GA. (0.093) CHANNEL SECURE TO FLOOR
Removable Hollow Metal Transom Bar

WELDED TO VERTICAL MEMBER
Frames for masonry walls are provided with either wire anchors or strap anchors and attached floor anchors. Anchors are spaced no more than 30" apart with the first anchor being located approximately 12" from the bottom of the frame.

1) Place frame where opening is to be created and place a wood spreader cut to exact opening width at floor level.
2) Fasten base anchor to the floor with type of fastener suitable to floor. Support and brace frame as required.
3) Level the head.
4) Plumb the jambs and square the corners.
5) Place a horizontal wood spreader with a bottom support at the midpoint of the opening.
Pressure-fit frames are designed for installation in existing prepared openings and are to fit tightly around the wall with minimal frame throat to wall clearance.

A new rough opening should be 1" to 1 1/4" wider on each side than the actual door width and 1" to 1 1/2" taller than the door opening height.

1) Place head in opening and push upward as far as possible.
2) Install either jamb and engage jamb clips in corresponding slots in head.
3) Install second jamb in same manner and position in opening.
4) Place a wood spreader (cut to exact opening width) at floor level.
5) Level the head and attach base anchors.
   Note: Notch drywall as required at base to accommodate anchors.
6) Adjust compression anchors to plumb frame in the opening.

Frame Installation- Drywall Pressure-Fit

WOOD SPREADER

BASE ANCHORS
Frames for stud walls are provided with either wood stud anchors or metal stud anchors and attached floor anchors. Anchors are spaced no more than 30" apart with the first anchor being located approximately 16" from the bottom of the frame.

1) Place frame where opening is to be created and place a wood spreader cut to the exact opening width at floor level.
2) Fasten base anchor to floor with type of fastener suitable to floor.
3) Level the head.
4) Plumb the jambs and square the corners.
5) Place a horizontal wood spreader with a bottom support at the midpoint of the opening.

Frame Installation- Wood and Metal Stud Walls

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Frames for existing masonry walls are provided pre-machined with dimpled spacer holes to receive \(\frac{3}{8}\)" expansion bolts and shields. This anchor type may also be utilized to anchor frames to existing wood stud framed openings.

Anchors are spaced no more than 30" apart with the first anchor being located approximately 12" from the bottom of the frame.

1) Place frame in opening and level the head by shimming the bottom of the frame as required.

2) Plumb the jambs and square the head.

3) Mark masonry wall through spacer holes in the frame.

4) Remove the frame from the opening and drill holes as required to receive spacer.

5) Install shields in the holes at fire rated openings.

6) Replace frame and attach to wall using flat head bolts supplied with anchor.

Frame Installation- Existing Wall

IDC Technical
ASSEMBLY INSTRUCTIONS FOR KNOCK DOWN FRAME

1. LAY OUT HEAD AND JAMBS AS SHOWN

2. Slide head on jambs, inserting jamb tabs into head slots

3. Bend tabs in head away from center of head toward the outside edge, flat against surface

4. Bend tabs on return of frame toward the opposite return and flat against the surface

Refer to Frame Installation Drawings TDF 15, TDF 16, TDF 17 and TDF 18 for additional information

KD Frame Assembly