1-3/4" LEAD LINED
VERTICALLY STEEL STIFFENED, SEAMED EDGES, CUSTOM TYPE
STEEL DOORS, BEVELED LOCK, HANDED

Designed to restrict radiation transmission.
Complies with NAAMM Specifications
22 gage steel stiffeners placed 6" apart and welded every 5" along their length. Seamless edges.
Fiberglass, sound deadening insulation between stiffeners.

Suggested Use:
Interior or Exterior...
Medical X-Ray Labs
Nuclear Medicine Storage
Industrial Applications
Cancer Treatment Facilities
Produce Irradiation Areas
Research Facilities
Inspection Departments

<table>
<thead>
<tr>
<th>MODEL</th>
<th>LEAD THICKNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>LL32</td>
<td>1/32&quot;</td>
</tr>
<tr>
<td>LL16</td>
<td>1/16&quot;</td>
</tr>
<tr>
<td>LL08</td>
<td>1/8&quot;</td>
</tr>
<tr>
<td>LL04</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>LLXX</td>
<td>CUSTOM</td>
</tr>
</tbody>
</table>

Experience a safer and more open world
Hardware locations shown match Ceco standard frames.

DOOR ELEVATION

VERTICAL SECTION

HORIZONTAL SECTIONS

(Conversion: 1" = 25.4 mm, e.g., 1–3/4" = 44.4 mm)

OPTIONAL:
GLASS KIT

POCKET SIZE
3/8" – 3/4"

GLASS KIT DESIGN MAY VARY
WITH GLASS THICKNESS
GLASS KIT FACTORY INSTALLED.
GLASS & GLAZING NOT FACTORY INSTALLED.

OPTIONAL:
GLASS KIT

POCKET SIZE
7/8" – 1 3/8"

GLASS KIT DESIGN MAY VARY
WITH GLASS THICKNESS
GLASS KIT FACTORY INSTALLED.
GLASS & GLAZING NOT FACTORY INSTALLED.

OVERLAPPING ASTRAGAL
(OPTIONAL)

FOR 1–3/4" THICK
DOORS

(2) 1/8" STEEL PLATES
LEAD STRIP
ASTRAGAL SHIPPED LOOSE FROM FACTORY.

#8 PAN HEAD SCREW

INACTIVE

ACTIVE

CecoDoor

ASSA ABLOY

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RETURN TO TOP
TECH-DATA

LEAD LINED DOORS

END CHANNEL PREPARATION

SEAMLESS EDGE

TOP CHANNEL WELDED TO BOTH THE TOP AND BOTTOM SKINS

16 GA. FULL HEIGHT ANGLE

BOTTOM CHANNEL WELDED TO BOTH THE TOP AND BOTTOM SKINS

BOTTOM CHANNEL INSTALLED FLUSH AT BOTTOM OF DOOR

VERTICAL EDGES

16 Gage Full Height Angle

Welded Seamless Edge

14 GAGE STEEL WELDED SEAMLESS (ONLY)

CLOSER REINFORCEMENT (OPTIONAL)

14 GAGE STEEL PLATES 20” LONG

LOCK PREPARATION

GOV. 160/161 CYLINDRICAL TYPE

LEAD SHIELDED HARDWARE BY OTHERS

(LC1) (ANSI A115.2)

2-3/4” BACKSET

LOCK EDGE IS BEVELED 1/8” in 2” (1:16)

HINGE PREPARATION

4-1/2 OR 5 IN. HIGH, STANDARD OR HEAVY WEIGHT, FULL MORTISE HINGES

ANSI 156.7 TEMPLATE

HINGE EDGE IS HANDED AND SQUARE

14 GA AND 12 GA DOORS REQUIRE HEAVY WEIGHT, FULL MORTISE HINGES

LOCK PREPARATION

GOV. 86-4 MORTISE TYPE

LEAD SHIELDED HARDWARE BY OTHERS

(LMO) SIMILAR TO DETAIL LESS FACE CUTOUT

(LPO) SIMILAR TO DETAIL LESS ALL CUTOUTS AND REINFORCEMENT

CORE

22 GAGE MINIMUM STIFFENERS SPACED NOT MORE THAN 6” APART

(HORIZONTAL SECTION)

LEAD SHEET BETWEEN STIFFENER SURFACE

FIBERGLASS INSULATION BETWEEN STIFFENERS

Conversion: 1” = 25.4 mm, e.g., 1-3/4” = 44.45 mm
SERIES LLQ, LLU, LLR LEAD LINED STEEL FRAMES
FOR 1-3/4" THICK DOORS
STANDARD WALL APPLICATION, HANDED

FRAMES WITH BACKBEND RETURNS
SHOULD BE CONSIDERED FOR
FINISHED WALL PROTECTION.

DEPTHS

<table>
<thead>
<tr>
<th>DEPTHS</th>
<th>Dim A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3-1/2&quot; THRU 14&quot;</td>
</tr>
</tbody>
</table>

MINIMUM DEPTHS WILL BE LIMITED BY FORMING,
LEAD THICKNESS AND HARDWARE.

FACES

<table>
<thead>
<tr>
<th>FACES</th>
<th>Dim B</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAMB</td>
<td>2&quot;</td>
</tr>
<tr>
<td>HEAD</td>
<td>2&quot; THRU 4&quot;</td>
</tr>
</tbody>
</table>

INSIDE

OUTSIDE

"KS" = KEY SIDE

(CONVERSION: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)
TECH-DATA

LEAD LINED STEEL FRAMES

Hardware locations shown match Ceco standard doors.

VERTICAL SECTION

AS A STANDARD, DOOR HAND WILL DETERMINE IF LEAD IS INSTALLED ON DOOR SIDE (DS) OR OPPOSITE DOOR SIDE OF FRAME. IF LEFT OR RIGHT HAND, LEAD WILL BE PLACED ON DOOR SIDE OF FRAME. IF REVERSE HANDED LEAD WILL BE PLACED ON OPPOSITE DOOR SIDE (ODS) OF FRAME.

STANDARD LEAD LINED STEEL FLOOR ANCHOR

14 GAGE MIN. WELDED ANCHOR
12 GAGE MAX. WELDED ANCHOR

5/16" MIN. HOLE
3/8" MAX. HOLE

LEAD LINED STEEL METAL STUD ANCHOR

16 GAGE STD.
14 GAGE OPT.

LEAD LINED STEEL WOOD/METAL STUD ANCHOR

16 GAGE STD.
14 GAGE OPT.

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RETURN TO TOP
**TECH-DATA**

**LEAD LINED STEEL FRAMES**

**WELDED CORNERS – STANDARD**

Corner joints are mitered, welded and ground smooth.

Available with 4” head

**CLOSER REINFORCEMENTS**

12 GA. PLATE

**OPTIONAL BACKBEND**

Frames with backbend returns, before drywall application.

16 or 14 GAGE ONLY

1/2”

**HINGE PREPARATION**

4–1/2” x .134 or .180
5” x .146 or .190

ANSI A156.7 TEMPLATE

STEEL 7 GAGE REINFORCING

1–15/16”

**LOCK STRIKE PREPARATION**

UNIVERSAL (4–7/8”) (SHOWN)
ANSI A115.1 & 2 TEMPLATE

Also available with prep for 2–3/4” "T" STRIKE

STEEL 12 GAGE REINFORCING

1–15/16”

(Conversion: 1” = 25.4 mm, e.g., 1–3/4” = 44.45 mm)
TECH-DATA

LEAD LINED DOORS & FRAMES

STANDARD SIZES

<table>
<thead>
<tr>
<th>NOMINAL DOOR OPENING</th>
<th>WIDTH</th>
<th>HEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SINGLE</td>
<td>DOUBLe</td>
<td></td>
</tr>
<tr>
<td>2'-0&quot;</td>
<td>4'-0&quot;</td>
<td>6'-8&quot;</td>
</tr>
<tr>
<td>2'-4&quot;</td>
<td>4'-8&quot;</td>
<td>7'-0&quot;</td>
</tr>
<tr>
<td>2'-6&quot;</td>
<td>5'-0&quot;</td>
<td>7'-2&quot;</td>
</tr>
<tr>
<td>2'-8&quot;</td>
<td>5'-4&quot;</td>
<td>7'-10&quot;</td>
</tr>
<tr>
<td>2'-10&quot;</td>
<td>5'-8&quot;</td>
<td>8'-0&quot;</td>
</tr>
<tr>
<td>3'-0&quot;</td>
<td>6'-0&quot;</td>
<td>8'-4&quot;</td>
</tr>
<tr>
<td>3'-4&quot;</td>
<td>6'-8&quot;</td>
<td>9'-0&quot;</td>
</tr>
<tr>
<td>3'-6&quot;</td>
<td>7'-0&quot;</td>
<td>10'-0&quot;</td>
</tr>
<tr>
<td>3'-8&quot;</td>
<td>7'-4&quot;</td>
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</tr>
<tr>
<td>3'-10&quot;</td>
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<td></td>
</tr>
<tr>
<td>4'-0&quot;</td>
<td>8'-0&quot;</td>
<td></td>
</tr>
</tbody>
</table>

FIRE DOORS

LABELING AGENCIES:
- UNDERWRITERS LABORATORY

TEST: UL10C, UL10B, UL1784,
& NFPA 252
- RATING: 20 MIN, 3/4 HR,
1 HR or 1-1/2 HR
- MAX SIZE: 4'0" x 9'0" SINGLE
8'0" x 9'0" PAIR
- 16, 14 & 12 GA. FRAMES
- 18 & 16 GA. DOORS
- DESIGNS: F, FG, G, N, & V
- LEAD LINED ASTRAGAL
- REQUIRED ON PAIRS
- TEMPERATURE RISE N/A
- LOUVERS NOT ALLOWED
- LEAD THICKNESS 1/16" Thru 3/16" ALLOWED.

Not all ratings are available in all sizes, designs and materials.

LEAD THICKNESS OPTIONS:
1/32", 1/16", 1/8", 1/4"

CONSULT FACTORY FOR THICKER OPTIONS OR FOR SIZES WIDER THAN 4' OR GREATER THAN 10' IN HEIGHT.

PRODUCT SPECIFICATIONS:

1-3/4" Thick steel doors shall be by Ceco Door Products. Doors shall conform to the Steel Door Institute guide specification, ANSI A250.8 and NAAMM specifications. See chart below for performance classifications.

LEAD LINED doors are welded seamless design. Face sheets are commercial quality hot-dipped galvannealed or galvanized steel (conforming to ASTM A924 and A653) - see chart below.

Door face sheets are joined at their vertical edge with a center seam the full height of door (welded seamless design). 22 gage steel vertical stiffeners (other gages optional) are placed no more than 6" apart and welded to both face sheets no more than 5" on center along their length. Fiberglass batting insulates the area between stiffeners. The top and bottom door edges are closed flush with 16 gage steel channels welded to both face sheets. Lead is placed between each half of the stiffeners.

Door and Frame Hardware Provisions: Consult hinge manufacturer for weight limitations and hinge recommendations. Mortised butt type hinges will have 7 gage steel reinforcements welded inside the frame throat and door edge. Reinforcements are drilled and tapped for fasteners in accordance with ANSI A156.7. Mortised hinge preparations are handcrafted. Door hinge edges are square. The door lock edge has a standard bevel (1:16). Lock edge is prepared for Gov. series 86, 160/161, or 90 locks in accordance with ANSI A115 (specify which). Strike jambis are prepared for a 4-7/8" universal or 2-3/4" cylindrical strike in accordance with ANSI A115.1 & 2 (specify which). Optional door closer reinforcement plates are 14 gage steel and 12 gage for frames. Lead shielded hardware provided by others. Frame corners are welded. Integral frame stop heights are 5/8". Silencers shall be adhesive back, supplied by others.

Paint: 1-3/4" steel doors & frames shall be provided with one coat of oven-cured neutral color primer paint. Primer coat shall conform with ANSI A250.10. The primer coat is a preparatory base for necessary finish painting. Finish colorstyle paint not available from factory.

MATERIAL

<table>
<thead>
<tr>
<th>DOOR FACE SHEETS</th>
<th>MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 Gage Steel</td>
<td>STD OPT</td>
</tr>
<tr>
<td>16 Gage Steel</td>
<td>STD OPT</td>
</tr>
<tr>
<td>14 Gage Steel</td>
<td>STD OPT</td>
</tr>
<tr>
<td>12 Gage Steel</td>
<td>STD OPT</td>
</tr>
</tbody>
</table>

(RECOMMENDED DOOR FRAME MATERIAL)

16 Gage Steel
16 or 14 Gage Steel
14 or 12 Gage Steel
12 Gage Steel

(Convertion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)