ENGINEERING DETAILS for
SERIES SR PIO-SONIC SOUND INSULATING DOOR ASSEMBLIES (STC 37 thru STC 52)

Specifications

Doors

1. Doors shall be formed of two 18 or 16 gage A60 Galvannealed steel sheets per ASTM A924 and A653 and shall be 1¾” thick in sizes up to 4’-0” x 8’-0” single and 8’-0” x 8’-0” pair.

2. Core shall be designed to insure maximum acoustical performance required.

3. STC 42 thru STC 52 Doors shall have no seams on the faces or edges of doors. Vertical edges of doors shall be continuously seam-welded, full height of the door. Mechanical joints or seams intermittently welded, on either the edge or face of door shall not be permitted. Weld marks on door face or edge shall not be permitted. STC 37 Doors shall have mechanical edge seams visible.

4. All hinge reinforcements shall be a minimum of 3/16” thick. Top hinge reinforcement shall be provided with a back-up reinforcement.

5. All doors shall be internally reinforced with a 13 gage plate, both sides of the door, for application of surface applied door closers and holders.

6. Glass Vision kit for STC 42 rating is supplied with all seals included. Maximum size: 22” x 36”.

7. Fire rated sound retardant doors, where indicated, shall be manufactured in accordance with UL or WHI procedures and bear the appropriate classification mark (label) from 20 minutes to 90 minutes.

8. All doors shall be cleaned and given one coat of rust-inhibitive primer electrostatically applied - in compliance with ANSI A 250.10.

9. Hardware reinforcements are in accordance with ANSI A 250.6. Locations are in accordance with ANSI/BHMA A156.115

10. Doors shall be packaged to minimize damage in transit and handling.

11. SR Piosonic Doors are supplied as assemblies

12. Door and Frame Assemblies are furnished with sound seals and Door Bottoms in accordance with the test procedures.
*Standard undercut is ¼". Undercut may vary due to job conditions. Fully describe sill condition other than standard. See M and N below.

DOOR ELEVATION
CONSTRUCTION DETAILS

A: YOKE & STRAP MASONRY ANCHOR

B: CLOSED CHANNEL STEEL STUD ANCHOR (Specify stud width)

C: EXISTING MASONRY ANCHOR 3/8" Bolt and Shield furnished when UL listed

D: BASE ANCHOR

E: STRIKE PREPARATION ANSI A156.115
FULL MORTISE HINGE PREPARATION (TOP HINGE FULL WIDTH AT F-52, F-48, FG-42)

CORNER CONNECTION WITH CLOSER REINFORCEMENT

TOP CHANNEL AND CLOSER REINFORCEMENT

STANDARD HINGE REINFORCEMENT TOP HINGE BACKUP SHOWN

GOV'T. 161 CYLINDRICAL (CYL) LOCK PREPARATION
STC 42 RATED DOORS INCLUDE VISION KITS AND GLAZING
STANDARD HARDWARE PREPARATIONS

HINGES: Doors and Frames to be mortised and reinforced for application of 4½” x 4½” x .180 Extra Heavy. Full Mortised Template Butt Hinges; 1½” pair@ 6’-8”, 7’-0” and 7’2” doors; 2 pair @ 7’10” and 8’0” doors. All hinge reinforcements are 3/16” thick; with backup at top hinge preparation.

STRIKES: ANSI A156.115 4⅞” strike preparation furnished standard. 2¾” strike preparation is optional.

LOCKS:
1. Gov’t 161 Cylindrical Lock/Latch, with 2¾” backset.
2. Universal Gov’t 86 Mortise Lock/Latch (to be used with full escutcheon trim), with 2¾” backset.
3. Multi-purpose preparation consisting of a Gov’t 86 edge preparation, with lock reinforcement installed. No cutouts on the faces of the door.
4. Reinforced Multi-purpose preparation consisting of Gov’t 86 edged preparation, with lock reinforcement installed. The lock stile to be reinforced, full height of the door, on both sides. The hinge stile is reinforced on both faces at panic device height. No cutouts on the faces of the door.

LIMITATIONS:
Slam action type latching necessary. Not recommended for use with Push & Pull, Unit Lock, Electric Strikes, Pivot Hinges (bottom), bottom Flushbolt, bottom rod of Vertical Rod panic or any other hardware involved in the bottom 4” of a PIO-SONIC door with a surface applied door bottom, such as Kick plates, Floor stops, etc. Consult appropriate hardware templates where stop mounted hardware such as Parallel Arm Closer. Brackets, Holders, Stops, Panic Device Roller Strikes. Vertical Rod Panic Device or other Mortise Strikes at head on jambs interfere with gasket function. Slight adjustment in mounting may be necessary.

Doors must be square edge.

NOTE: In order to provide our customers with the finest products, manufactured in the most up to date manner. Pioneer Industries reserves the right to make design or specific construction changes without notice.
TECHNICAL DATA – DOORS  
SR PIO-SONIC SERIES

ACOUSTICAL PERFORMANCE TEST DATA

<table>
<thead>
<tr>
<th>Series</th>
<th>ULTRA-SONIC</th>
<th>VAL-U-SONIC</th>
<th>VUE-SONIC</th>
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<tbody>
<tr>
<td>Model</td>
<td>F-52</td>
<td>F-48</td>
<td>F-46</td>
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<tr>
<td>STC Rating</td>
<td>52</td>
<td>48</td>
<td>46</td>
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<tr>
<td>Maximum UL LABEL</td>
<td>1 1/2 Hrs.</td>
<td>1 1/2 Hrs.</td>
<td>3 Hrs.</td>
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**TYPE**

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<tr>
<th>NOTES</th>
<th>1,2 &amp; 5</th>
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<th>1,2 &amp; 6</th>
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<tr>
<td>WEIGHT: Lbs. Per Sq.Ft.</td>
<td>12</td>
<td>9.9</td>
<td>6.8</td>
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<td>10.0</td>
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<td>TEST REPORT NUMBER</td>
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<td>TL 69-186</td>
<td>01-41782.01</td>
<td>01-41782.01</td>
<td>TL 64-229</td>
<td>01-41784.01</td>
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**NOTES:**

1. Three sided fixed Acoustical Seals with Automatic Surface Applied Door Bottom (Activated at Hinge Jamb)
2. Automatic Mortised Door Bottom available for Construction Rating Only
3. Glass preparation to receive double ¼” wire glass furnished and installed by others. Maximum clear opening 24½” x 32¾”.
4. Vision kits are supplied with Glazing (optional Fire rated) maximum size 22"x32".
5. Maximum size available with UL rating: 4’-0” x 8’-0”
6. Uni-Seal gasketing provided for unrated UL openings.

**TYPICAL SOUND LEVELS**

<table>
<thead>
<tr>
<th>TYPE OF SOUND</th>
<th>DECIBEL RATING</th>
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<tbody>
<tr>
<td>QUIET CONVERSATION WHISPER QUIET RADIO AVERAGE AUDITORIUM</td>
<td>20-40 MODERATE</td>
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<tr>
<td>WINDOW AIR CONDITIONER NORMAL CONVERSATION PRIVATE OFFICE</td>
<td>40-60 MODERATE TO LOUD</td>
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<tr>
<td>AVERAGE FACTORY NOISY HOME TYPING POOL BUSY STREET BUSY RESTAURANT AVERAGE RADIO</td>
<td>60-80 LOUD</td>
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<tr>
<td>ENGINE LATHES AUTOMATIC SCREW MACHINE NOISY FACTORY HEAVY DIESEL VEHICLE UNMUFFLED TRUCK AIR MACHINES NOISY OFFICE POLICE WHISTLE CUT OFF SAW</td>
<td>80-100 VERY LOUD</td>
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<tr>
<td>AIR-HAMMER BOILER ROOM ELEVATED TRAIN LOUD STREET NOISE THUNDER JET AIR LINER RIVETER</td>
<td>100-120 DAFENING</td>
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<tr>
<td>ARTILLERY CLOSE-UP JET ENGINE PNEUMATIC ROCK DRILL</td>
<td>120-155 EXTREME DANGER</td>
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