TYPICAL SPECIFICATIONS FOR DUNHAM CONCEALED RADITORS

The heating contractor shall furnish and install where shown on plans Dunham Concealed Radiators of the exact size and type indicated on the plans and in the schedule.

Heating elements are to consist of straight seamless drawn copper tubes streamlined in shape, with copper fins pressed over the tubes and completely coated with solder to form an integral unit. The tubes are to be pressed into heavy copper plates and brazed. The header plates are to be rolled over and brazed to a one-piece bronze casting, forming the covers. Each element shall be tested at the factory after assembly under a minimum of one hundred pounds per square inch hydrostatic pressure, and shall be tight under this condition.

Heating elements and enclosures shall be installed in accordance with the details furnished by the manufacturer, and as shown on the plans. Where protective covers are specified, they are to be left in place until the building is plastered and the trim applied.

Proper recesses will be provided by the general contractor but it shall be the duty of the heating contractor to furnish him with the necessary information regarding size and location of all openings.

Enclosures shall be of the manufacturer’s standard design. Types and dimensions are to be as listed in the schedule.

Grilles are to be of the design shown on the schedule, and are to be furnished with or without dampers as indicated. Where dampers are specified, they are to be of one-piece sheet steel, attached to the outlet grille, and operated by a mechanism entirely behind the grille face except for the bakelite operating knob. The damper mechanism is to be carefully machined and assembled so as to eliminate chattering during operation, and is to remain in any position to which the damper is set.

Ratings are to be “C.M.C.” and fully guaranteed by the manufacturer. Each radiator shall be equipped with the Dunham Adjustable Regulating Fitting of the type shown on the schedule. Regulating Fittings must be installed with the adjusting screw in the full open position. After the piping system has been thoroughly flushed out, the Regulating Fitting shall be adjusted as required for the radiator on which it is installed.

Typical Concealed Radiator Schedule

<table>
<thead>
<tr>
<th>Room</th>
<th>No. of Rads</th>
<th>Sq. Ft. Each Rad.</th>
<th>Heating Element Nos.</th>
<th>Enclosure Type</th>
<th>Ht.</th>
<th>Col-lars*</th>
<th>Cover</th>
<th>Regulating Fitting Type</th>
<th>Design</th>
<th>Damp-er</th>
<th>Inlet Grille</th>
<th>Hooks and Springs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dining</td>
<td>1</td>
<td>38.6</td>
<td>L400B</td>
<td>RC</td>
<td>20</td>
<td>Std.</td>
<td>Yes</td>
<td>199</td>
<td>H1</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Dining</td>
<td>1</td>
<td>47.8</td>
<td>L400C</td>
<td>RC</td>
<td>20</td>
<td>Std.</td>
<td>Yes</td>
<td>198</td>
<td>H1</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Living</td>
<td>2</td>
<td>53.4</td>
<td>L400C</td>
<td>RCI</td>
<td>26</td>
<td>Std.</td>
<td>Yes</td>
<td>188</td>
<td>H5</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Bath</td>
<td>1</td>
<td>14.4</td>
<td>L225A</td>
<td>PF1</td>
<td>20</td>
<td>1½</td>
<td>Yes</td>
<td>188</td>
<td>H6</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Bed</td>
<td>1</td>
<td>44.7</td>
<td>L350C</td>
<td>MP</td>
<td>24</td>
<td></td>
<td>Yes</td>
<td>188</td>
<td>H2</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

\*Refers to depth of air outlet collar. Air inlet collar will be made same dimensions unless otherwise specified. \†Refers to temporary outlet collar cover. \‡Refers to hooks and springs for removable baseboard section. H1, H2, etc. refer to grille designs shown on page 268.

Specify Element number as well as Enclosure Type, height and depth of collar, design number of Grille, with (or without) damper, with (or without) inlet Grille, hooks and springs on order.
Types RC and RCI
Completely Recessed Casing

The Type RC, or completely recessed casing enclosure is designed to be built into a recess in the wall, and the front plastered over. The standard enclosure extends only to the bottom of the heating element, usually 5 1/2" above the finished floor, thus leaving more space in which to make steam connections, and materially reducing the installation cost. It also provides a means of adjusting slightly for varying heights of recesses. On special orders, the back and ends of the casing can be built to extend down to the finished floor, if this dimension is accurately specified.

Fig. 1476—Type RC Completely Recessed Casing.

The Type RCI is an adaptation of the Type RC, to include an inlet grille, rather than the removable base-board section shown in Fig. 1476. The grille is the same size as the outlet grille, and a pleasing result is obtained, although there is some decrease in capacity in the same space, because of the additional height required for the inlet grille.

In both the Type RC and RCI, the distance from the front of the casing to the base of the angle iron collar is 3 1/4", standard. This is a thickness of ordinary lath and plaster. If the wall construction (such as glazed tile) necessitates a collar length other than 3 1/4", the dimension must be specified on the order. The lip which extends from the lower front edge in the Type RC and which serves as a plaster stop, will always be furnished in the same length as the outlet collar unless otherwise specified.
Types RC and RCI
Installation Dimensions

Dimension "L" is the nominal radiator length and also the length of the casing. The length of the heating element is \( \frac{1}{2} \) inch less than the nominal radiator length in all cases.

Dimension "D" is the recess depth measured from the back of the plaster to the rear of the recess and is as follows for the various widths of heating elements:

<table>
<thead>
<tr>
<th>Heating Elements</th>
<th>Dimension &quot;D&quot; or &quot;E*&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;A&quot; width</td>
<td>3(\frac{5}{8})&quot;</td>
</tr>
<tr>
<td>&quot;B&quot; width</td>
<td>5(\frac{5}{8})&quot;</td>
</tr>
<tr>
<td>&quot;C&quot; width</td>
<td>7(\frac{5}{8})&quot;</td>
</tr>
<tr>
<td>&quot;D&quot; width</td>
<td>10(\frac{7}{8})&quot;</td>
</tr>
</tbody>
</table>

*Dimension "E" is for Types MP and MPR.

If it is desired to have the inlet grille of Type RCI flush with the baseboard, the inlet collar must be shown as having greater depth than the outlet collar by the width of the baseboard, usually about \( \frac{3}{8} \)".
Types MP and MPR

Metal Panel Enclosure

The Type MP enclosure is a distinct development in panel type construction. Instead of building the metal panel in one piece, as has been common practice in the past, the Type MP panel is built in two sections, the lower of which extends for a distance of 8” from the floor. This is done in order to avoid the necessity of removing the entire panel for access to the radiator, valves, and traps.

The upper section is screwed to the wood ground in the recess. The lower section is fitted with a metal lip which slides into a hidden groove in the upper section, and it is almost impossible to detect the joint between the two sections. The lower section is instantly removable without the use of tools.

The Type MPR enclosure is constructed exactly the same as the Type MP except that a metal recess liner is added. An inlet grille is optional with this type of enclosure, but the construction of the lower section will be the same in either case.
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Types PF and PFI
Plaster Front Enclosure

The appearance of the completed installation using the Type PF Enclosure is exactly the same as that of the RC enclosure. The enclosures differ only in that the metal liner box, which is a part of the RC enclosure is omitted. However, the same notes apply for this type as for the previous as far as installation is concerned. The Type PFI enclosure is the Type PF fitted with an inlet grille.

Fig. 1483A
Notes on RC Enclosures also apply to Types PF and PFI Enclosures.

In the Type PF enclosure, the back of the radiator recess is formed by a sheet of insulating material. The wood ground forms the top and sides, and extends to the back of the plaster. The fronts of either the Type RC or Type PF enclosure are fitted with tie-wires for fastening metal lath, thus preventing buckling.
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Types FC and WC
Cabinet Enclosures

For modernizing existing buildings, and for new buildings whose construction renders it impractical to install any of the totally concealed type of Dunham Concealed Radiators, either of the Type FC or WC Enclosures are recommended.

The Type FC is designed to be installed on the floor, discharging its heated air from an outlet grille either in the front panel or in the top. In the case of a front outlet cabinet, any of the six standard grille designs illustrated on page 268 may be used. If a top outlet grille is desired only a square lattice grille design can be furnished.

The Type WC is of the same general construction as the Type FC, except that the legs are omitted, and the cabinet is to be hung on the wall, leaving the floor beneath it clear for sweeping and dusting. Hanging is by lag screws or bolts through the three holes provided in the back sheet.

![Type FC](image)

Dimension “E,” the overall width of the cabinet, is 3¾”, 5¾”, 7½” and 11” for the “A,” “B,” “C” and “D” width cabinets respectively. Special widths to house two elements side by side can be arranged.

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Fig. 1756. Plan View Showing Cabinet Partially Recessed In Wall

Dimensions marked with asterisk locate mounting holes in back panel of WC cabinet.

Cabinets can be partly recessed. The recess height should be 3/4" greater than the overall height of the cabinet. Recess depth is governed by the building construction. The panel front is instantly removable without use of tools.

The Types FC and WC may be supplied, on special order, with humidifying pans built into the casing, in which case the top of the cabinet is removable for ease of filling the pans with water. There is some decrease in capacity when humidifying pans are used.

**Top Outlet Enclosures Types TO and TO1** are available to provide for an air outlet through a grille in the window sill. In all other respects, installation and construction are similar to the Type RC Enclosure except that a plain lattice design grille furnished in heavy steel for greater strength must be used. Type TO has a removable baseboard section; Type TO1, an inlet grille.
Concealed Radiator outlet grille designs H1 to H7 for use with RC, RCI, PF, PFI, MP, MPR, FC & WC Enclosures. The designs are perforated in heavy sheet steel which is electrically welded to a highly finished bar frame lined with felt to eliminate air leakage. Dampers are optional. Air inlet grilles are of the same attractive designs.