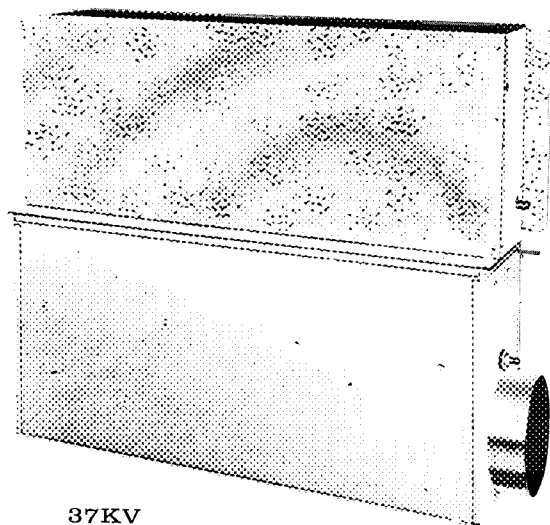
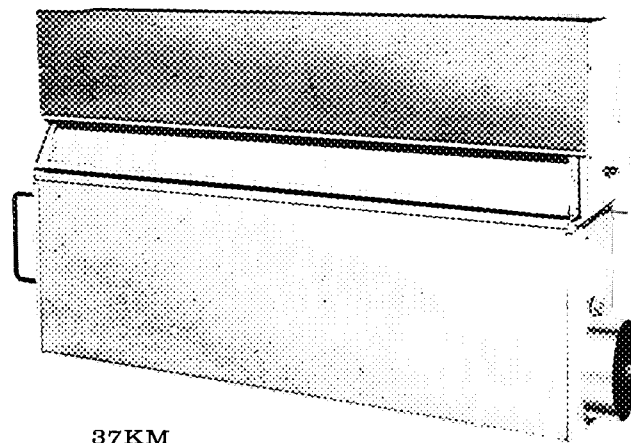


*Superseded by - 2P*

37KV



37KM

## Blow-Thru Reheat Terminal

### DESCRIPTION

The new 37KV functions as the terminal unit for a single duct, constant volume system, providing heating and ventilating only or complete air conditioning. Prime applications are hospitals, laboratories, offices, schoolrooms and similar structures.

Reheat is provided by hot water or steam coils on the 37KV (vertical), 37KM (vertical with gravity damper) and 37KH (horizontal) units, or by electric heaters on the 37KJ (vertical) units.

Five unit sizes are available, ranging from 75 to 900 cfm. The base unit includes air inlet (round or rectangular side inlet or rectangular bottom inlet), plenum, manual balancing damper, acoustic baffle, heating coil or electric heater, and discharge air outlet. An automatic system-powered gravity damper (37KM units) permits gravity heating during shutdown periods.

Contact your Carrier representative for data on cabinets for these units.

### FEATURES

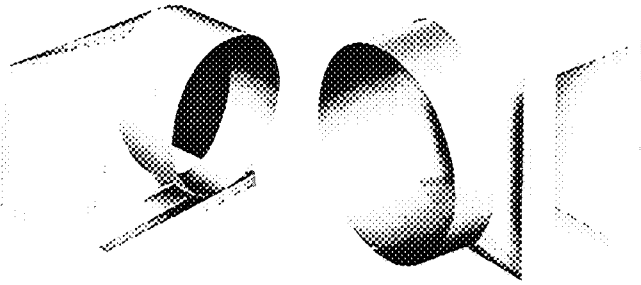
- **Efficient Air Distribution** – Advanced design of damper maintains uniform air flow over the entire unit length, reducing possibility of drafts. Damper operates quietly, with high resistance to dirt build-up. The triangular shape of the sound baffle is an additional factor in ensuring an even distribution of air.
- **Quiet Operation** – Textile fiber glass in plenum, coil section and sound baffle reduces sound level generated in the system and in the unit.
- The sound power level ratings of these units were established by tests conducted in Carrier laboratories in accordance with the latest ASHRAE Standard 36B-63. Evaluation of test data verifies exceptionally low sound power level of these units.
- **Emergency Gravity Heating (37KM)** – An automatic gravity damper provides a gravity heating capability in case of power failure.
- **Individual Room Control** – Air may be heated to the occupant's requirements. Constant volume air dis-

charge provides adequate ventilation and air circulation at all times.

- **Minimum Space Requirements** – Units provide maximum air quantities per inch of unit length, permitting smaller size units to be selected.
- **Reduced Installation Cost** – Easy unit mounting, field-reversible coils, four coil connection options, and a discharge section readily adaptable to ductwork are features which save time and money.
- **Minimum Operating Expense** – Hot water, steam or electric heat may be selected to ensure the most economical type of operation.
- **Low-Cost Addition of Refrigeration** – No unit modification is required. Just add a cooling coil and water chilling equipment to the central system.
- **Owner/Builder Satisfaction** – These advanced design units are produced from premium materials and with superior assembly techniques. As a result, the equipment provides the high level of performance and durability required for a sound, long-term investment.

## ACCESSORIES

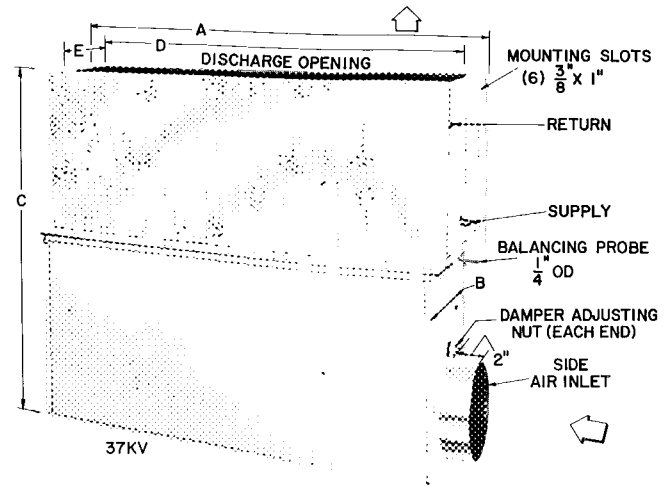
- **Acoustically Designed Boot (5-, 6- or 8-in.)** to permit the use of round floor sleeves (vertical units only).
- **Transition Fitting (7-in.)** permits transition from 7-in. duct to rectangular side inlet.



6-INCH BOOT

8-INCH BOOT

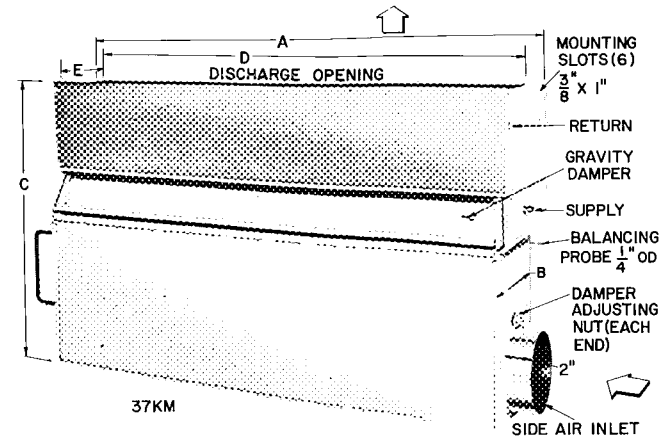
## DIMENSIONS



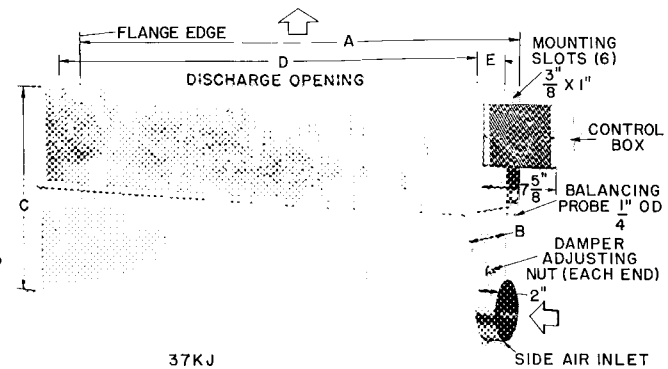
37KV

## PHYSICAL DATA

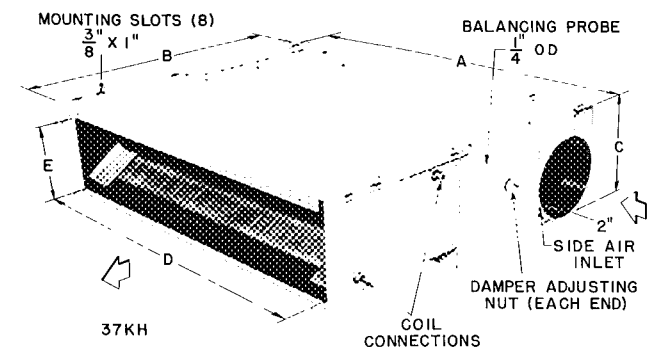
| UNIT 37KV, KH, KJ, KM             | 017   | 025 | 035  | 050                             | 070 |      |     |    |
|-----------------------------------|---|-----|------|---------------------------------|-----|------|-----|----|
| <b>BASE UNIT WT (lb)</b>          |   |     |      |                                 |     |      |     |    |
| W/6-Tube Coil - KV, KH            | 24  | 32  | 42   | 58                              | 80  |      |     |    |
| KM                                | 26  | 34  | 46   | 63                              | 86  |      |     |    |
| W/4-Tube Coil - KV, KH            | 23  | 31  | 41   | 56                              | 76  |      |     |    |
| W/Electric Heater - KJ            | 22  | 30  | 40   | 56                              | 78  |      |     |    |
| <b>COIL</b>                       | 4- or 6-tube, 1-row, aluminum plate fins, 13/in (KM - 6-tube only)  |     |      |                                 |     |      |     |    |
| <b>ELECTRIC HEATER (KJ)</b>       | Two-circuit, finned sheath cartridge; 115-, 208-, 240-, 277-1-60    |     |      |                                 |     |      |     |    |
| <b>DIMENSIONS</b>                 |   |     |      |                                 |     |      |     |    |
| Base Unit (ft-in.)                |   |     |      |                                 |     |      |     |    |
| KV, KH, KJ, KM                    | A   | 1-5 | 1-11 | 2-7                             | 3-7 | 4-11 |     |    |
| KV, KM, KJ                        | B   |     |      | 0-8 <sup>3</sup> / <sub>4</sub> |     |      |     |    |
| KH                                | B   |     |      | 2-0 <sup>7</sup> / <sub>8</sub> |     |      |     |    |
| KV, KM, KJ                        | C*  |     |      | 2-0 <sup>7</sup> / <sub>8</sub> |     |      |     |    |
| KH                                | C   |     |      | 0-8 <sup>3</sup> / <sub>4</sub> |     |      |     |    |
| Discharge Outlet                  | D   | 1-2 | 1-8  | 2-4                             | 3-4 | 4-8  |     |    |
|                                   | E   |     |      | 0-5 <sup>1</sup> / <sub>2</sub> |     |      |     |    |
| Air Inlet (in.)                   |   |     |      |                                 |     |      |     |    |
| Side (diam)                       | 6   |     |      |                                 |     |      |     |    |
| Bottom                            | 4x8   4x8   6x10   6x10   6x14                                      |     |      |                                 |     |      |     |    |
| Rect. side (for boot)             | 6 <sup>3</sup> / <sub>8</sub> x 8 <sup>3</sup> / <sub>8</sub>       |     |      |                                 |     |      |     |    |
| <b>MINIMUM FREE AREA (sq in.)</b> |   |     |      |                                 |     |      |     |    |
| Disch Grille                      | 35  | 45  | 61   | 70                              | 91  | 101  | 214 | 20 |
| Recirc Grille (KM only)           | 65  | 119 | 175  | 130                             | 170 | 163  | 228 | 0  |
| <b>COIL CONNECTIONS (in.)</b>     | Standard: 1/2 ODF sweat   |     |      |                                 |     |      |     |    |
| Supply and Return                 | Optional: 1/2 ODM flare, 1/2 ODM flare w/vent, 1/2 ODF sweat w/vent |     |      |                                 |     |      |     |    |



37KM



37KJ



37KH

\*Add 1 in. for inlet collar on bottom inlet units

NOTE: Coil suitable for working pressures of 250 psig



**PERFORMANCE DATA (Contd)**  
**PRIMARY AIR DATA (37KV,KH,KM,KJ)**

| UNIT<br>SIZE | CFM | 37KV, KH                     |         |                         |         | 37KM                         |         |                         |         | 37KJ                         |         |                         |         |
|--------------|-----|------------------------------|---------|-------------------------|---------|------------------------------|---------|-------------------------|---------|------------------------------|---------|-------------------------|---------|
|              |     | PRESS. REQUIREMENTS (in. wg) |         |                         |         | PRESS. REQUIREMENTS (in. wg) |         |                         |         | PRESS. REQUIREMENTS (in. wg) |         |                         |         |
|              |     | Side Inlet                   |         | Bottom Inlet            |         | Side Inlet                   |         | Bottom Inlet            |         | Side Inlet                   |         | Bottom Inlet            |         |
|              |     | Min<br>Inlet<br>Static*      | Probet† | Min<br>Inlet<br>Static* | Probet† | Min<br>Inlet<br>Static‡      | Probet† | Min<br>Inlet<br>Static‡ | Probet† | Min<br>Inlet<br>Static*      | Probet† | Min<br>Inlet<br>Static* | Probet† |
| 017          | 75  | .060                         | 017     | 032                     | —       | .700                         | 038     | 700                     | 034     | 034                          | —       | .025                    | —       |
|              | 100 | .100                         | 033     | 057                     | 013     | .700                         | .072    | 700                     | 064     | 062                          | .020    | 045                     | 013     |
|              | 125 | .150                         | 052     | 090                     | .020    | .700                         | 115     | 700                     | 100     | .100                         | 032     | 072                     | .021    |
|              | 150 | .210                         | 076     | 130                     | 031     | 700                          | .170    | .700                    | 150     | 150                          | 048     | 110                     | 031     |
|              | 175 | .270                         | 105     | 180                     | .043    | 700                          | .230    | 700                     | .200    | 200                          | 065     | 150                     | .043    |
|              | 200 | .350                         | 140     | .240                    | .058    | 700                          | 300     | 700                     | .250    | 270                          | 086     | .190                    | 058     |
|              | 225 | .430                         | 180     | 310                     | 072     | 700                          | 390     | .700                    | .320    | 340                          | .110    | 245                     | 074     |
|              | 250 | .510                         | 220     | 380                     | 090     | 720                          | 490     | 700                     | .400    | .420                         | 140     | 300                     | 095     |
| 025          | 175 | 120                          | 048     | 100                     | 053     | 580                          | .120    | 580                     | 110     | 078                          | .024    | .078                    | .025    |
|              | 200 | 150                          | 064     | 130                     | 070     | 580                          | 160     | 580                     | 140     | 100                          | 032     | 100                     | 035     |
|              | 225 | 190                          | 080     | .170                    | 088     | 580                          | 200     | 580                     | .180    | .130                         | 040     | 130                     | 045     |
|              | 250 | 230                          | .100    | 210                     | 110     | 580                          | 250     | 580                     | 230     | .160                         | 050     | 160                     | 055     |
|              | 275 | .270                         | 120     | 260                     | 140     | .580                         | 290     | 580                     | 270     | 190                          | 060     | 190                     | 066     |
|              | 300 | 340                          | 145     | .300                    | 160     | 580                          | 360     | .580                    | .330    | 230                          | 074     | 230                     | .080    |
|              | 325 | 390                          | .170    | .340                    | .200    | .580                         | .420    | 580                     | 380     | 270                          | .084    | 270                     | 090     |
|              | 350 | 450                          | 200     | 410                     | 240     | 680                          | 500     | 680                     | .460    | 310                          | 100     | 310                     | .110    |
| 035          | 250 | 110                          | .050    | .120                    | .055    | 560                          | 110     | 560                     | 110     | 063                          | .033    | 090                     | 028     |
|              | 300 | 150                          | 074     | .180                    | 080     | .560                         | 150     | 560                     | 150     | 092                          | 048     | 130                     | 040     |
|              | 350 | .210                         | .100    | 240                     | .110    | 560                          | 210     | 560                     | 210     | .125                         | .065    | 180                     | 055     |
|              | 400 | .260                         | 135     | 310                     | .150    | 560                          | .280    | .560                    | 280     | 165                          | 086     | 240                     | 072     |
|              | 450 | 320                          | 170     | 410                     | .200    | .560                         | 350     | 560                     | 350     | 210                          | 106     | .305                    | 090     |
|              | 500 | .400                         | 205     | 500                     | 250     | 640                          | 440     | .700                    | 440     | 250                          | 130     | 390                     | .113    |
|              | 550 | 480                          | .250    | 620                     | 320     | 880                          | 520     | 960                     | 520     | 310                          | .160    | .470                    | .140    |
| 050          | 300 | 070                          | .027    | .076                    | 033     | .470                         | .066    | 470                     | 066     | 030                          | .017    | .060                    | 017     |
|              | 350 | 090                          | 037     | 100                     | 045     | 470                          | 090     | 470                     | 090     | 043                          | 022     | .085                    | .025    |
|              | 400 | .120                         | 050     | 130                     | 060     | 470                          | 120     | .470                    | 120     | 055                          | .029    | 110                     | 031     |
|              | 450 | 150                          | 062     | 170                     | 076     | 470                          | .150    | 470                     | 150     | 070                          | 036     | 142                     | .041    |
|              | 500 | 180                          | 078     | 210                     | 095     | 470                          | 190     | 470                     | .190    | 088                          | .045    | 180                     | 050     |
|              | 550 | 210                          | .094    | 250                     | 120     | 470                          | 230     | 470                     | 230     | 110                          | 055     | 220                     | 061     |
|              | 600 | 240                          | 110     | 300                     | 140     | .470                         | 280     | 470                     | .280    | .130                         | 066     | 260                     | .073    |
|              | 650 | 290                          | .135    | 360                     | 165     | 470                          | 325     | 560                     | 325     | 150                          | .080    | 310                     | 088     |
|              | 700 | 330                          | 155     | 410                     | .190    | 470                          | .380    | 640                     | 380     | 170                          | 094     | 380                     | 100     |
| 750          | 370 | 180                          | 480     | .220                    | 550     | 440                          | 760     | 440                     | 200     | 110                          | 420     | 120                     |         |
| 070          | 450 | 098                          | .037    | .110                    | .032    | 450                          | 080     | 450                     | 080     | 048                          | 023     | .095                    | 020     |
|              | 500 | .120                         | 046     | .130                    | 038     | 450                          | 100     | 450                     | 100     | 060                          | 028     | .115                    | 026     |
|              | 550 | .150                         | 055     | 160                     | 045     | 450                          | 120     | 450                     | .120    | 072                          | 034     | 135                     | 031     |
|              | 600 | 170                          | .064    | .180                    | 053     | 450                          | 140     | 450                     | 140     | 087                          | 040     | .160                    | 037     |
|              | 650 | .200                         | 075     | 210                     | .062    | .450                         | .170    | 450                     | 170     | 100                          | 048     | .190                    | 044     |
|              | 700 | 230                          | .090    | 250                     | 070     | 450                          | 200     | 450                     | 200     | 120                          | 055     | .220                    | 050     |
|              | 750 | 260                          | 100     | 280                     | 080     | 450                          | .220    | 450                     | 220     | 140                          | .064    | .250                    | .057    |
|              | 800 | 300                          | 112     | .330                    | 092     | 450                          | 260     | 450                     | .260    | .155                         | 072     | .280                    | 065     |
|              | 850 | 340                          | 130     | 370                     | 105     | 450                          | 290     | 510                     | 290     | 180                          | 080     | 315                     | 074     |
| 900          | 380 | 140                          | 420     | 115                     | .450    | .325                         | 570     | .325                    | .200    | .090                         | 350     | 080                     |         |

\*Static pressure required at unit inlet to produce rated air flow with wide open damper.

†To balance unit, internal damper must be adjusted until required probe pressure is obtained

‡Required to produce rated air flow with wide open damper and to operate gravity damper.

NOTE: Cfm ratings are based on minimum free areas shown in Physical Data table.

## PERFORMANCE DATA (Contd)

### 37KV,KH,KM HOT WATER COIL HEATING CAPACITIES (1000 Btuh)

| UNIT<br>SIZE | CFM            | 37KV, 37KH     |                |                |                |                |       | 37KM           |       |       |
|--------------|----------------|----------------|----------------|----------------|----------------|----------------|-------|----------------|-------|-------|
|              |                | Gpm            |                |                |                |                |       | Gpm            |       |       |
|              |                | 1.0            |                | 1.5            |                | 2.0            |       | 1.0            | 1.5   | 2.0   |
|              | 4-Tube<br>Coil | 6-Tube<br>Coil | 4-Tube<br>Coil | 6-Tube<br>Coil | 4-Tube<br>Coil | 6-Tube<br>Coil |       | 6-Tube<br>Coil |       |       |
| 017          | 75             | 6.55           | 7.55           | 6.97           | 8.03           | 7.05           | 8.11  | 6.93           | 7.36  | 7.44  |
|              | 100            | 7.85           | 9.03           | 8.35           | 9.60           | 8.44           | 9.70  | 8.14           | 8.65  | 8.74  |
|              | 125            | 8.84           | 10.15          | 9.40           | 10.80          | 9.50           | 10.90 | 9.13           | 9.70  | 9.80  |
|              | 150            | 9.75           | 11.32          | 10.38          | 12.05          | 10.50          | 12.17 | 10.17          | 10.80 | 10.90 |
|              | 175            | 10.75          | 12.35          | 11.42          | 13.15          | 11.55          | 13.28 | 11.10          | 11.82 | 11.94 |
|              | 200            | 11.74          | 13.55          | 12.49          | 14.40          | 12.60          | 14.54 | 12.17          | 12.94 | 13.08 |
|              | 225            | 12.58          | 14.59          | 13.39          | 15.50          | 13.50          | 15.65 | 13.10          | 13.94 | 14.10 |
|              | 250            | 13.48          | 15.60          | 14.33          | 16.60          | 14.50          | 16.77 | 13.90          | 14.80 | 14.90 |
| 025          | 175            | 12.90          | 14.68          | 13.72          | 15.60          | 14.29          | 16.20 | 13.20          | 14.05 | 14.60 |
|              | 200            | 13.68          | 15.72          | 14.55          | 16.74          | 15.12          | 17.40 | 14.15          | 15.05 | 15.65 |
|              | 225            | 14.40          | 16.55          | 15.34          | 17.60          | 15.95          | 18.30 | 14.85          | 15.80 | 16.44 |
|              | 250            | 15.10          | 17.40          | 16.08          | 18.50          | 16.70          | 19.24 | 15.60          | 16.60 | 17.30 |
|              | 275            | 15.85          | 18.25          | 16.85          | 19.40          | 17.55          | 20.20 | 16.35          | 17.40 | 18.10 |
|              | 300            | 16.40          | 19.20          | 17.45          | 20.40          | 18.15          | 21.20 | 17.00          | 18.08 | 18.80 |
|              | 325            | 16.90          | 19.60          | 18.00          | 20.85          | 18.72          | 21.65 | 17.70          | 18.84 | 19.60 |
|              | 350            | 17.45          | 20.30          | 18.57          | 21.60          | 19.30          | 22.45 | 18.33          | 19.50 | 20.25 |
| 035          | 250            | 17.00          | 19.55          | 18.90          | 21.75          | 19.85          | 22.80 | 17.55          | 19.50 | 20.45 |
|              | 300            | 18.55          | 21.35          | 20.62          | 23.75          | 21.65          | 24.90 | 19.28          | 21.40 | 22.45 |
|              | 350            | 19.90          | 22.85          | 22.10          | 25.40          | 23.20          | 26.65 | 20.60          | 22.85 | 24.00 |
|              | 400            | 21.20          | 24.40          | 23.55          | 27.10          | 24.70          | 28.45 | 22.00          | 24.40 | 25.60 |
|              | 450            | 22.35          | 25.80          | 24.80          | 28.65          | 26.05          | 30.15 | 23.00          | 25.60 | 26.85 |
|              | 500            | 23.44          | 27.10          | 26.05          | 30.15          | 27.35          | 31.60 | 24.05          | 26.75 | 28.05 |
|              | 550            | 24.42          | 28.25          | 27.18          | 31.40          | 28.50          | 32.95 | 25.08          | 27.85 | 29.25 |
|              | 300            | 22.85          | 26.20          | 25.10          | 28.80          | 26.60          | 30.55 | 23.35          | 25.65 | 27.20 |
| 050          | 350            | 24.20          | 27.85          | 26.60          | 30.60          | 28.20          | 32.40 | 24.85          | 27.30 | 28.95 |
|              | 400            | 25.45          | 29.35          | 28.00          | 32.25          | 29.65          | 34.20 | 26.90          | 29.55 | 31.30 |
|              | 450            | 26.95          | 31.00          | 29.60          | 34.00          | 31.40          | 36.05 | 27.85          | 30.60 | 32.40 |
|              | 500            | 28.00          | 32.25          | 30.80          | 35.45          | 32.65          | 37.60 | 29.00          | 31.85 | 33.80 |
|              | 550            | 29.35          | 33.65          | 32.25          | 37.00          | 34.20          | 39.20 | 30.20          | 33.20 | 35.20 |
|              | 600            | 30.45          | 35.05          | 33.45          | 38.50          | 35.50          | 40.80 | 31.40          | 34.55 | 36.60 |
|              | 650            | 31.60          | 36.15          | 34.70          | 39.70          | 36.80          | 42.05 | 32.65          | 35.90 | 38.00 |
|              | 700            | 32.60          | 37.35          | 35.80          | 41.00          | 38.00          | 43.50 | 33.50          | 36.85 | 39.10 |
| 070          | 750            | 33.50          | 38.40          | 36.80          | 42.20          | 39.00          | 44.70 | 34.45          | 37.85 | 40.01 |
|              | 450            | 29.90          | 34.60          | 35.20          | 40.60          | 37.60          | 43.50 | 31.10          | 36.60 | 39.20 |
|              | 500            | 31.25          | 36.00          | 36.80          | 42.40          | 39.40          | 45.40 | 32.30          | 38.00 | 40.07 |
|              | 550            | 32.45          | 37.40          | 38.20          | 44.00          | 40.90          | 47.10 | 33.55          | 39.45 | 42.20 |
|              | 600            | 33.55          | 38.60          | 39.45          | 45.40          | 42.20          | 48.50 | 34.60          | 40.80 | 43.60 |
|              | 650            | 34.60          | 39.80          | 40.70          | 46.90          | 43.50          | 50.20 | 35.80          | 42.10 | 45.10 |
|              | 700            | 35.60          | 40.09          | 41.90          | 48.10          | 44.80          | 51.50 | 36.80          | 43.40 | 46.45 |
|              | 750            | 36.60          | 42.05          | 43.00          | 49.50          | 46.00          | 53.00 | 37.90          | 44.60 | 47.80 |
|              | 800            | 37.20          | 42.80          | 43.80          | 50.40          | 46.90          | 53.90 | 38.60          | 45.40 | 48.50 |
|              | 850            | 37.80          | 43.50          | 44.50          | 51.10          | 47.60          | 54.60 | 39.35          | 46.25 | 49.50 |
| 900          | 38.25          | 44.00          | 45.00          | 51.75          | 48.10          | 55.40          | 40.00 | 47.00          | 50.40 |       |

**NOTE:**

Capacities based on 55 F primary air temperature and 200 F entering water temperature, with minimum free areas as shown in Physical Data table

## PERFORMANCE DATA (Contd)

### 37KV, KH, KM STEAM COIL HEATING CAPACITIES (1000 Btuh)

| UNIT SIZE | CFM | 37KV, KH    |             | 37KM        |       |
|-----------|-----|-------------|-------------|-------------|-------|
|           |     | 4-Tube Coil | 6-Tube Coil | 6-Tube Coil |       |
| 017       | 75  | 8.15        | 10 90       | 9.69        |       |
|           | 100 | 9.60        | 12 77       | 11 44       |       |
|           | 125 | 10 79       | 14.40       | 13 00       |       |
|           | 150 | 12 00       | 16.05       | 14 40       |       |
|           | 175 | 13 10       | 17 50       | 15 70       |       |
|           | 200 | 14.32       | 19.25       | 17 15       |       |
|           | 225 | 15 42       | 20 80       | 18 45       |       |
|           | 250 | 16.52       | 22 35       | 19 80       |       |
|           | 025 | 175         | 15 62       | 20.80       | 18 70 |
|           |     | 200         | 16 72       | 22 35       | 20 00 |
| 225       |     | 17.60       | 23 40       | 21 15       |       |
| 250       |     | 18 45       | 24 65       | 22 20       |       |
| 275       |     | 19 35       | 25.80       | 23 20       |       |
| 300       |     | 20 00       | 26 70       | 24 10       |       |
| 325       |     | 20 80       | 27 80       | 25 10       |       |
| 350       |     | 21 55       | 28 70       | 26 00       |       |
| 035       |     | 250         | 21.65       | 28 95       | 25 85 |
|           |     | 300         | 23 65       | 31 60       | 28 40 |
|           | 350 | 25.40       | 33 90       | 30 45       |       |
|           | 400 | 27 05       | 36 10       | 32 40       |       |
|           | 450 | 28 50       | 38 10       | 34 30       |       |
|           | 500 | 29.95       | 40 00       | 35.85       |       |
|           | 550 | 31.25       | 41 70       | 37 20       |       |
|           | 050 | 300         | 28 80       | 38 00       | 34 30 |
|           |     | 350         | 30 45       | 40 70       | 36 60 |
|           |     | 400         | 32 10       | 42 90       | 38 60 |
| 450       |     | 33.90       | 45 30       | 40 80       |       |
| 500       |     | 35 40       | 47 30       | 42 60       |       |
| 550       |     | 37 00       | 49 40       | 44 40       |       |
| 600       |     | 38.40       | 51 30       | 46 20       |       |
| 650       |     | 39 60       | 53 10       | 47 90       |       |
| 700       |     | 41 00       | 55 00       | 49 40       |       |
| 750       |     | 42.10       | 55 90       | 50 60       |       |
| 070       | 450 | 40 40       | 54 10       | 48 40       |       |
|           | 500 | 42.00       | 56 40       | 50 50       |       |
|           | 550 | 43.80       | 58.50       | 52 50       |       |
|           | 600 | 45 20       | 60 30       | 54 30       |       |
|           | 650 | 46.75       | 62.40       | 56 10       |       |
|           | 700 | 48 00       | 64.10       | 57 75       |       |
|           | 750 | 49 40       | 65 90       | 59 20       |       |
|           | 800 | 50 25       | 67 00       | 60 40       |       |
|           | 850 | 51 00       | 68 40       | 61 25       |       |
|           | 900 | 51 75       | 69.40       | 62.00       |       |

NOTE: Capacities based on 55 F primary air temperature and 2 psig steam, with minimum free areas as shown in Physical Data table

### 37KJ HEATING CAPACITIES (Watts, Btuh)

| UNIT SIZE | HEATER SIZE (watts) | 1st STEP |       | 2nd STEP |       |
|-----------|---------------------|----------|-------|----------|-------|
|           |                     | Watts    | Btuh  | Watts    | Btuh  |
| 017       | 600                 | 300      | 1020  | 600      | 2040  |
|           | 1200                | 600      | 2040  | 1200     | 4080  |
|           | 1800                | 900      | 3060  | 1800     | 6120  |
| 025       | 1000                | 500      | 1700  | 1000     | 3400  |
|           | 1800                | 900      | 3060  | 1800     | 6120  |
|           | 2600                | 1300     | 4320  | 2600     | 8840  |
| 035       | 1200                | 600      | 2040  | 1200     | 4080  |
|           | 2400                | 1200     | 4080  | 2400     | 8160  |
|           | 3600                | 1800     | 6120  | 3600     | 12240 |
| 050       | 2000                | 1000     | 3400  | 2000     | 6800  |
|           | 3600                | 1800     | 6120  | 3600     | 12240 |
|           | 5200                | 2600     | 8840  | 5200     | 17680 |
| 070       | 2400                | 1200     | 4080  | 2400     | 8160  |
|           | 4800                | 2400     | 8160  | 4800     | 16320 |
|           | 7300                | 3650     | 12410 | 7300     | 24820 |

NOTE: 37KJ units must be mounted vertically

### 37KM GRAVITY HEATING CAPACITIES (Btuh)

| UNIT SIZE | HOT WATER Gpm |      |      | STEAM |
|-----------|---------------|------|------|-------|
|           | 1.0           | 1.5  | 2.0  |       |
| 017       | 1245          | 1270 | 1283 | 1780  |
| 025       | 1770          | 1810 | 1830 | 2530  |
| 035       | 2480          | 2530 | 2555 | 3540  |
| 050       | 3540          | 3620 | 3656 | 5120  |
| 070       | 4970          | 5070 | 5120 | 7100  |

NOTES:

- 1 Capacities based on 200 F entering water, 2 psig steam, 60 F room temperature
- 2 37KM units are mounted vertically

### GRAVITY CAPACITY MULTIPLIERS FOR COLLAR HEIGHT (37KM)\*

|   |      | COLLAR HEIGHT (in.)† |      |      |      |      |      |      |      |      |    |
|---|------|----------------------|------|------|------|------|------|------|------|------|----|
|   |      | 0                    | 4    | 8    | 12   | 16   | 20   | 24   | 28   | 32   | 36 |
| 0 | 1.00 | 1.22                 | 1.38 | 1.53 | 1.65 | 1.75 | 1.83 | 1.90 | 1.97 | 2.04 |    |

\*For use with units having an additional sheet metal collar attached to discharge section

†Collar height is height from top of unit to discharge grille

### CAPACITY MULTIPLIERS FOR TEMP DIFFERENCE

| UNIT OPERATION                  | TEMPERATURE DIFFERENCE (F)* |      |      |     |     |     |     |     |     |
|---------------------------------|-----------------------------|------|------|-----|-----|-----|-----|-----|-----|
|                                 | 180                         | 160  | 140  | 120 | 100 | 80  | 60  | 40  | 20  |
| <b>BLOW-THRU (37KV, KH, KM)</b> |                             |      |      |     |     |     |     |     |     |
| Hot Water                       | 1.24                        | 1.10 | .97  | .83 | .69 | .55 | .41 | .27 | .14 |
| Steam                           | 1.10                        | .98  | .86  | .74 | —   | —   | —   | —   | —   |
| <b>GRAVITY (37KM)</b>           |                             |      |      |     |     |     |     |     |     |
| Hot Water                       | 1.45                        | 1.21 | 1.00 | .82 | .64 | .47 | .33 | .22 | .14 |
| Steam                           | 1.21                        | 1.01 | .83  | .68 | —   | —   | —   | —   | —   |

\*Temperature difference is hot water or steam supply temperature minus primary air temperature

## PERFORMANCE DATA (Contd)

### WATER PRESSURE DROP THRU COIL (ft)

| UNIT<br>37KV,<br>KH, KM | 4-TUBE COIL |      |       | 6-TUBE COIL |       |       |
|-------------------------|-------------|------|-------|-------------|-------|-------|
|                         | Gpm         |      |       | Gpm         |       |       |
|                         | 1.0         | 1.5  | 2.0   | 1.0         | 1.5   | 2.0   |
| 017                     | .70         | 1.43 | 2.40  | 1.05        | 2.15  | 3.60  |
| 025                     | 1.20        | 2.40 | 4.00  | 1.80        | 3.60  | 6.00  |
| 035                     | 1.53        | 3.16 | 5.20  | 2.30        | 4.75  | 7.80  |
| 050                     | 1.93        | 3.93 | 6.67  | 2.90        | 5.90  | 10.00 |
| 070                     | 3.33        | 6.67 | 11.10 | 5.00        | 10.00 | 16.50 |

### ADDITIONAL STATIC PRESSURE FOR ACCESSORY BOOT (in. wg)\*

| CFM | BOOT INLET DIAM (in.) |     |     |
|-----|-----------------------|-----|-----|
|     | 5                     | 6   | 8   |
| 100 | .01                   | —   | —   |
| 200 | .02                   | .01 | —   |
| 300 | .05                   | .02 | —   |
| 400 | .09                   | .04 | .01 |
| 500 | .14                   | .06 | .02 |
| 600 | .20                   | .09 | .03 |
| 700 | .27                   | .13 | .04 |
| 800 | .38                   | .18 | .06 |
| 900 | .50                   | .25 | .08 |

Runout velocities exceed 3000 fpm. See Standard Unit Air Connections table.

\*Must be added to minimum inlet static pressure for side inlet

### PRIMARY AIR REQUIREMENTS FOR ELECTRIC HEAT (cfm)

| TOTAL HEATER WATTAGE | MINIMUM REQUIRED CFM |
|----------------------|----------------------|
| 1000                 | 70                   |
| 2000                 | 130                  |
| 3000                 | 200                  |
| 4000                 | 270                  |
| 5000                 | 340                  |
| 6000                 | 420                  |
| 7000                 | 520                  |
| 8000                 | 680                  |

#### NOTES:

- Based on 75 F primary air
- Minimum cfm is the primary air cfm required to maintain sufficient air over the electric elements for satisfactory performance. Failure to provide this air may trip the thermal overload, resulting in an inoperative condition.

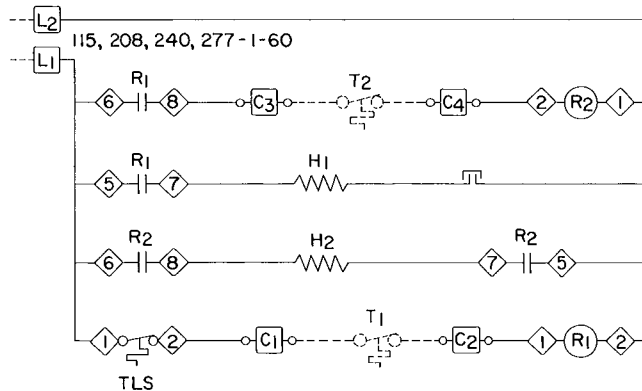
## ELECTRICAL DATA

### 37KJ ELECTRIC HEATER DATA (Single Phase, 60-Cycle)

| UNIT SIZE | HEATER SIZE (Watts) | FULL LOAD AMPS |            |            |            |
|-----------|---------------------|----------------|------------|------------|------------|
|           |                     | 115 Volts*     | 208 Volts* | 240 Volts* | 277 Volts* |
| 017       | 600                 | 5.2            | 2.9        | 2.5        | 2.2        |
|           | 1200                | 10.4           | 5.8        | 5.0        | 4.3        |
|           | 1800                | 15.6           | 8.7        | 7.5        | 6.5        |
| 025       | 1000                | 8.7            | 4.8        | 4.2        | 3.6        |
|           | 1800                | 15.6           | 8.7        | 7.5        | 6.5        |
|           | 2600                | 22.6           | 13.5       | 11.7       | 9.4        |
| 035       | 1200                | 10.4           | 5.8        | 5.0        | 4.3        |
|           | 2400                | 20.8           | 11.6       | 10.0       | 8.7        |
|           | 3600                | 31.2           | 17.4       | 15.0       | 13.0       |
| 050       | 2000                | 17.4           | 9.6        | 8.4        | 7.2        |
|           | 3600                | 31.2           | 17.4       | 15.0       | 13.0       |
|           | 5200                | 45.3           | 25.0       | 21.7       | 18.8       |
| 070       | 2400                | —              | 11.6       | 10.0       | 8.7        |
|           | 4800                | —              | 23.2       | 20.0       | 17.3       |
|           | 7300                | —              | 35.0       | 30.4       | 26.4       |

\*Heaters are designed to operate satisfactorily at 10% above and 15% below the voltage shown

### ELECTRIC HEATER SCHEMATIC DIAGRAM



- H1** - Rear Heater  
**H2** - Front Heater  
**T1** - To be higher range of 2-stage thermostat  
**T2** - To be lower range of 2-stage thermostat  
**R** - Relay  
**TLS** - Temp Limit Switch
- Terminal Board Conn  
 Connections (Unmarked)
- NOTES:**  
 1. Rear heater must be energized first on temp drop.  
 2. One thermostat may control several units if units are wired in parallel with it and if thermostat current rating is adequate
- Field Wiring  
 ——— Factory Wiring

## CONTROLS

### Hot Water or Steam Coils (37KV, KH, KM)

Space requirements are maintained by manual or thermostatic control of fluid flow to the coil.

Manual control is accomplished by adjusting a hand valve to regulate flow to variations in room load.

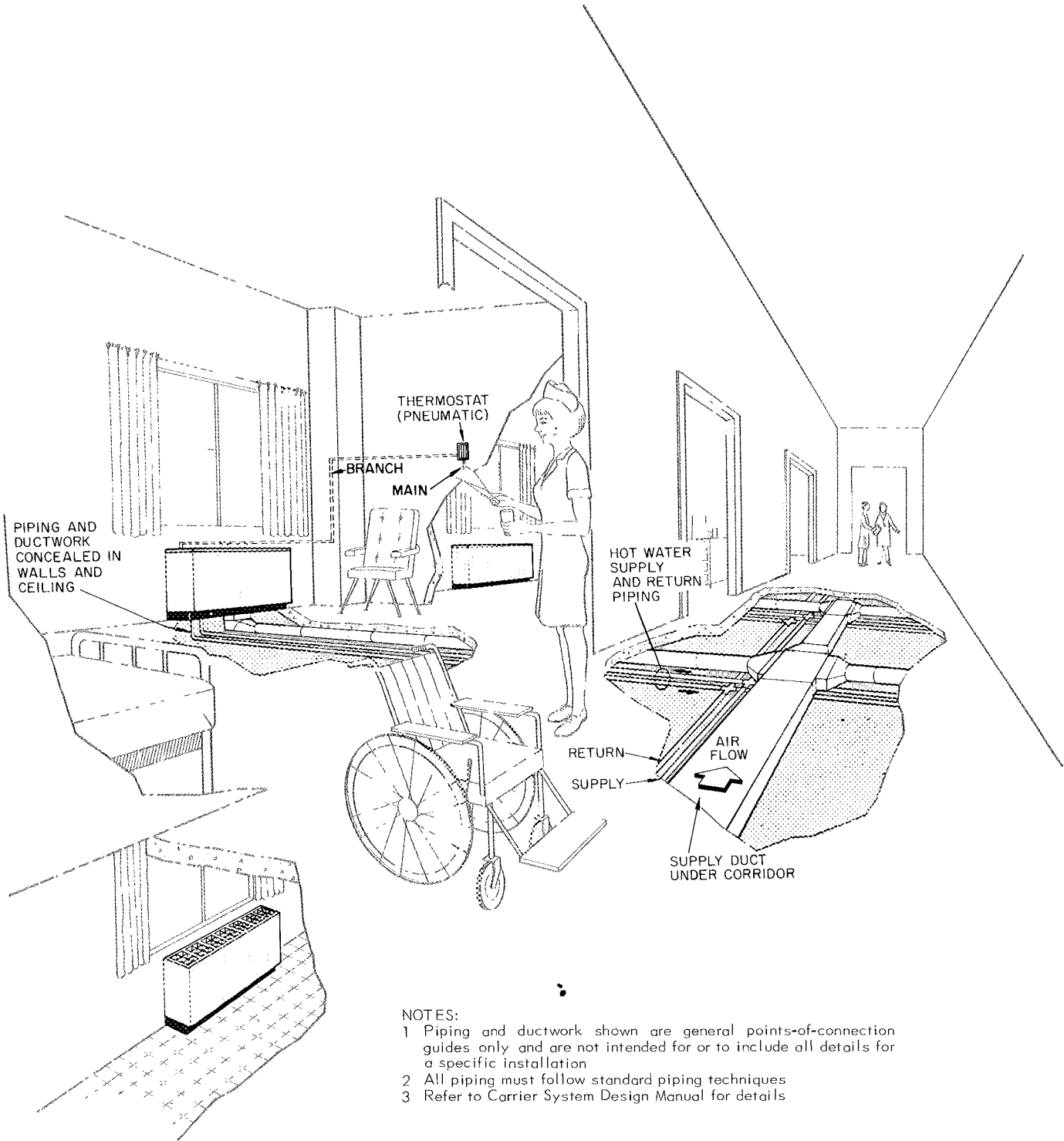
Thermostatic control (electric or pneumatic) is accomplished with a nonreversing direct acting thermostat (field supplied) and a normally open valve. This control arrangement is especially advantageous on 37KM units where emergency gravity heating is available in case of power failure.

### Electric Heat (37KJ)

Space requirements are maintained by energizing the electric heaters in two steps. Relays, thermal cutout and terminal block are factory supplied and wired. Thermostats are field supplied.

The unit must be interlocked with the primary fan apparatus in order to de-energize the unit heaters when the fan is off. Failure to do so allows the heaters to be energized without primary air, and cycling by the limit switch will decrease heater life.

## TYPICAL PIPING



**NOTES:**

- 1 Piping and ductwork shown are general points-of-connection guides only and are not intended for or to include all details for a specific installation
- 2 All piping must follow standard piping techniques
- 3 Refer to Carrier System Design Manual for details

Manufacturer reserves the right to change any product specifications without notice.

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