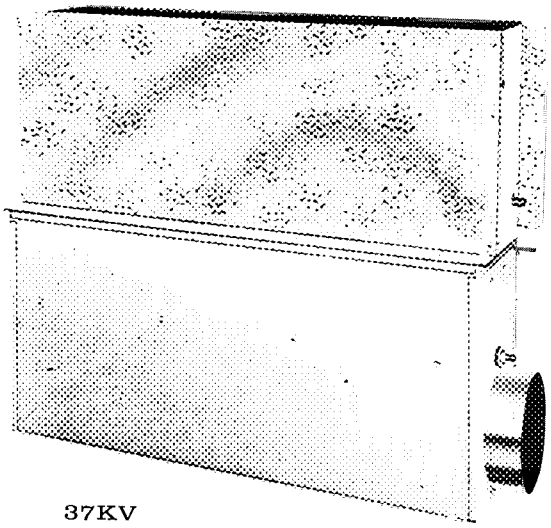
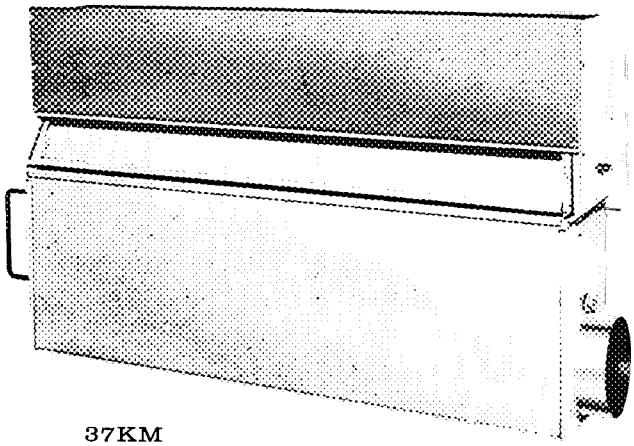
Carrier®

75 to 900 Cfm **37K**

Superseded by -2P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 discharge 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.

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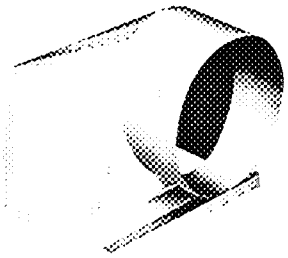
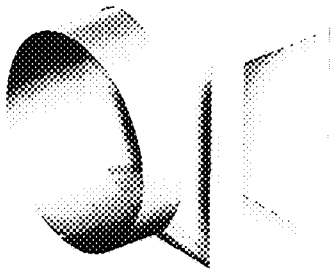
ACCESSORIES

- **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

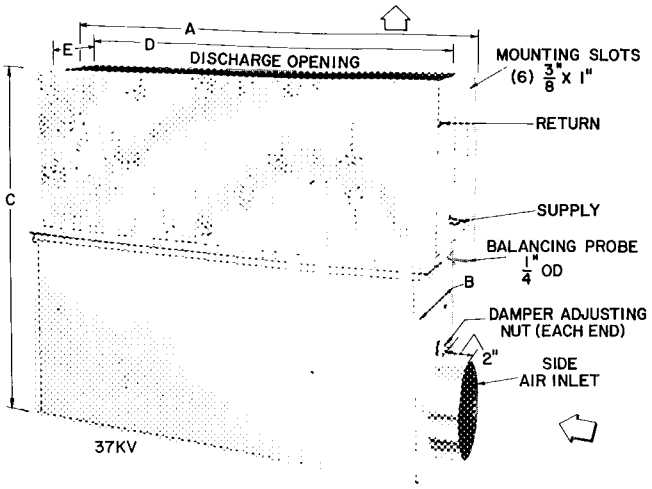
PHYSICAL DATA

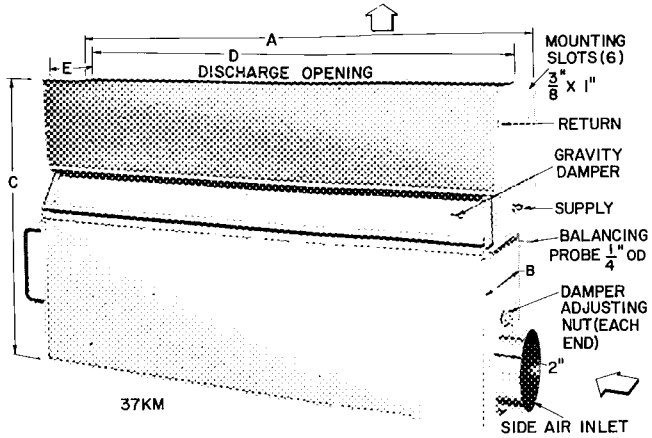
UNIT 37KV,KH,KJ,KM		017	025	035	050	070
BASE UNIT WT (lb)						
W/6-Tube Coil – KV,KH		24	32	42	58	80
KM		26	34	46	63	86
W/4-Tube Coil – KV,KH		23	31	41	56	76
W/Electric Heater – KJ		22	30	40	56	78
COIL		4- or 6-tube, 1-row, aluminum plate fins, 13/in (KM – 6-tube only)				
ELECTRIC HEATER (KJ)		Two-circuit, finned sheath cartridge; 115-, 208-, 240-, 277-1-60				
DIMENSIONS						
Base Unit (ft–in.)						
KV,KH,KJ,KM	A	1–5	1–11	2–7	3–7	4–11
KV,KM,KJ	B	0–8¾				
KH	B	2–0⅞				
KV,KM,KJ	C*	2–0⅞				
KH	C	0–8¾				
Discharge Outlet	D	1–2	1–8	2–4	3–4	4–8
	E	0–5½				
Air Inlet (in.)						
Side (diam)		6				
Bottom		4×8	4×8	6×10	6×10	6×14
Rect. side (for boot)		6⅜ × 8⅜				
MINIMUM FREE AREA (sq in.)						
Disch Grille		35 4	50 6	70 9	101 2	142 0
Recirc Grille (KM only)		65 1	97 5	130 0	163 0	228 0
COIL CONNECTIONS (in.)		Standard: ½ ODF sweat				
Supply and Return		Optional: ½ ODM flare, ½ ODM flare w/vent, ½ ODF sweat w/vent				

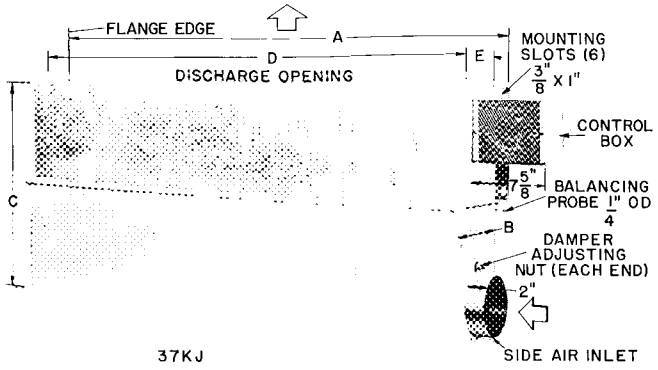
*Add 1 in. for inlet collar on bottom inlet units

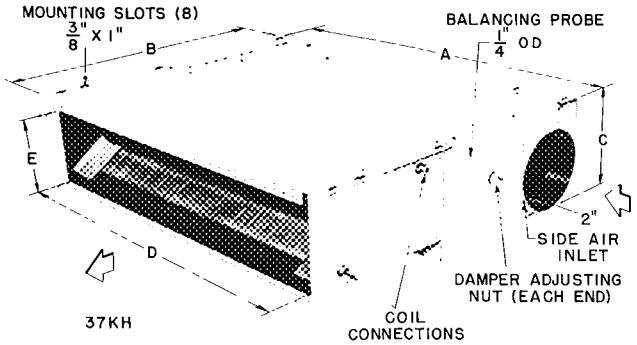
NOTE: Coil suitable for working pressures of 250 psig

DIMENSIONS









SELECTION PROCEDURE (With Examples)

I Determine job requirements.

A. Type of reheat – Electric, hot water or steam.

B. Room primary air requirements – use formula:

$$cfm = \frac{\text{sensible cooling load}}{1.09\ (\text{room temp} - \text{supply air temp})}$$

C. Reheat capacity required – Heat required to offset heat loss plus heat required to raise winter supply air mixture to room design temperature.

D. Room design temperature.

E. Gravity heat required – Room heat loss adjusted to emergency requirements.

F. Primary air temperature, entering water temperature or steam pressure

G. Acceptable room sound level.

II Determine size and number of units required. Using the Primary Air Data table, determine size and number of units which can provide required primary air. From Air Quantity Selection Guide, verify that this selection falls within the normal to maximum sound level range. (Note connections given in Standard Unit Air Connections table)

III Determine pressure requirements of selected unit. Using Primary Air Data table, read inlet and probe pressures for side or bottom inlet.

IV Select reheat section (coil or heater) which provides required heating capacities with fan on and with convection (gravity). Use appropriate heating capacities table. For other than rated conditions, apply multipliers from applicable tables

V Determine:

A. Water pressure drop for hot water coils (Water Pressure Drop Thru Coil table), or

B. Minimum cfm for electric heat (Primary Air Requirements for Electric Heat table).

EXAMPLES

Hospital Patient Room with Hot Water Heat

I Given:

Room design temperature	75 F
Entering water temperature	200 F
Required primary air	175 cfm
Required heating capacity	12,500 Btuh
Primary air temperature	55 F
Required Gravity Heating Capacity	1700 Btuh

II From the Primary Air Data table, select one 37KM025 at 175 cfm. This selection satisfies sound level recommendations given in Air Quantity Selection Guide.

III From same table, read pressure requirements (side inlet):

Minimum inlet pressure	58 in. wg
Probe pressure	12 in. wg

IV From the Heating Capacities table, read a capacity of 13,200 Btuh for this unit. Capacity is adequate.

V From the Water Pressure Drop table, read coil pressure drop of 1.8 ft at 1.0 gpm.

UNIT SCHEDULE – HOSPITAL PATIENT ROOM

Unit Size	No. Units	Cfm/ Unit	Press. (in. wg) Min Inlet	Press. (in. wg) Probe	Capacity (Btuh) Induction	Capacity (Btuh) Gravity	Press. Drop (ft)
37KM 025	1	175	58	12	13200	1770	1.8

Based on 75 F room air, 55 F primary air, 200 F ewt and 1.0 gpm.

General Office with Electric Heat

I Given:

Room design temperature	75 F
Required primary air	1700 cfm
Required heating capacity	14,400 watts (49,100 Btuh)
Primary air temperature	55 F

II From the Primary Air Data table, select two 37KJ070 units at 850 cfm/unit. This selection satisfies sound level recommendations given in the Air Quantity Selection Guide.

III From the Primary Air Data table, the required pressures (side inlet) are:

Minimum inlet	18 in. wg
Probe	.08 in. wg

IV From Heating Capacities table (37KJ) select two 7300-watt heaters. Read a 2nd Step (max) capacity of 7300 watts (24,820 Btuh) per heater. Capacity is adequate.

V By interpolation from the Primary Air Requirements table, 568 cfm is required for satisfactory heater operation.

UNIT SCHEDULE – GENERAL OFFICE APPLICATION

Unit Size	No. Units	Cfm/ Unit	Press. (in. wg) Min Inlet	Press. (in. wg) Probe	Capacities (watts) 1st Step	Capacities (watts) 2nd Step
37KJ 070	2	850	18	08	3650	7300

PERFORMANCE DATA

AIR QUANTITY SELECTION GUIDE (cfm)

37KV,KH,KJ*	017		025		035		050		070			
APPLICATION	Design Sound Level Criteria											
	N	M	N	M	N	M	N	M	N	M	N	M
General Office	225	240	310	325	440	540	550	750	850	900	900†	900†
Private Office	190	250	250	350	350	480	410	660	680	900	800	900†
Executive Office	190	230	250	320	350	430	410	570	680	870	800	900†
School Classroom	190	240	250	330	350	450	410	590	680	900	800	900†
Hospital Patient Room	160	190	210	260	270	350	300	400	450	630	540	750
Hotel and Apartment	190	210	250	280	350	390	410	450	680	720	800	900†

N – Normal **M** – Maximum

For use with 7-in. transition fitting only.

*For 37KM units:
Reduce N (Normal) values 5% for hospitals; 15% for other applications
Reduce M (Maximum) values 10% for all applications.

†These values are limited by the critical velocity range shown in the Standard Unit Air Connections table

NOTES:

1 Data in this Guide is based on use of proper unit runout connections as shown in Standard Unit Air Connections table

2 This Guide may be used as a general aid to unit selection For applications requiring specific sound levels, consult your Carrier representative for sound power level data

STANDARD UNIT AIR CONNECTIONS

BASE UNIT CONNECTION	DUCT CONNECTION Size (in.)	DUCT CONNECTION Required Access.*	INLET VELOCITY (fpm) 1000	1500	2000	2500	3000
			Air Quantity (cfm)				
Straight Side Inlet	6 diam	None	200	290	390	490	585
	7 diam	7-in. Transition	272	410	540	680	810
Straight Bottom Inlet	4 × 8	None	225	350	450	565	680
	6 × 10		420	625	835	1040	1250
	6 × 14		584	876	1168	1460	1752
Rect. Side Inlet with Floor Feed	5 diam	5-in. Boot	130	210	275	350	415
	6 diam	6-in. Boot	200	290	390	490	585
	8 diam	8-in. Boot	350	525	700	875	1035

Low Velocity Range – Runout velocities provide low sound levels

Normal Velocity Range – Runout velocities provide acceptable sound levels with average fitting arrangement

Critical Velocity Range – Runout velocities above 2500 fpm require well-designed and carefully installed ductwork.

*See Accessories (page 2)

PERFORMANCE DATA (Contd)

PRIMARY AIR DATA (37KV,KH,KM,KJ)

UNIT SIZE	CFM	37KV, KH PRESS. REQUIREMENTS (in. wg)				37KM PRESS. REQUIREMENTS (in. wg)				37KJ PRESS. REQUIREMENTS (in. wg)			
		Side Inlet		Bottom Inlet		Side Inlet		Bottom Inlet		Side Inlet		Bottom Inlet	
		Min Inlet Static*	Probe†	Min Inlet Static*	Probe†	Min Inlet Static‡	Probe†	Min Inlet Static‡	Probe†	Min Inlet Static*	Probe†	Min Inlet Static*	Probe†
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 SIZE	CFM	37KV, 37KH Gpm 1.0 4-Tube Coil	37KV, 37KH Gpm 1.0 6-Tube Coil	37KV, 37KH Gpm 1.5 4-Tube Coil	37KV, 37KH Gpm 1.5 6-Tube Coil	37KV, 37KH Gpm 2.0 4-Tube Coil	37KV, 37KH Gpm 2.0 6-Tube Coil	37KM Gpm 1.0 6-Tube Coil	37KM Gpm 1.5 6-Tube Coil	37KM Gpm 2.0 6-Tube 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
050	300	22 85	26 20	25 10	28 80	26 60	30.55	23.35	25.65	27 20
	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
	750	33 50	38 40	36.80	42 20	39.00	44 70	34 45	37.85	40 01
070	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 4-Tube Coil	37KV, KH 6-Tube Coil	37KM 6-Tube Coil
	75	8.15	10 90	9.69
	100	9.60	12 77	11 44
	125	10 79	14.40	13 00
017	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
	175	15 62	20.80	18 70
	200	16 72	22 35	20 00
	225	17.60	23 40	21 15
025	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
	250	21.65	28 95	25 85
	300	23 65	31 60	28 40
	350	25.40	33 90	30 45
035	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
	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
050	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
	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
070	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 Watts	1st STEP Btuh	2nd STEP Watts	2nd STEP Btuh
	600	300	1020	600	2040
017	1200	600	2040	1200	4080
	1800	900	3060	1800	6120
	1000	500	1700	1000	3400
025	1800	900	3060	1800	6120
	2600	1300	4320	2600	8840
	1200	600	2040	1200	4080
035	2400	1200	4080	2400	8160
	3600	1800	6120	3600	12240
	2000	1000	3400	2000	6800
050	3600	1800	6120	3600	12240
	5200	2600	8840	5200	17680
	2400	1200	4080	2400	8160
070	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 1.0	HOT WATER Gpm 1.5	HOT WATER Gpm 2.0	STEAM
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
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
BLOW-THRU (37KV, KH, KM)									
Hot Water	1 24	1 10	97	83	69	55	.41	27	14
Steam	1 10	98	86	.74	–	–	–	–	–
GRAVITY (37KM)									
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 37KV, KH, KM	4-TUBE COIL Gpm 1.0	1.5	2.0	6-TUBE COIL Gpm 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:
1 Based on 75 F primary air
2. 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

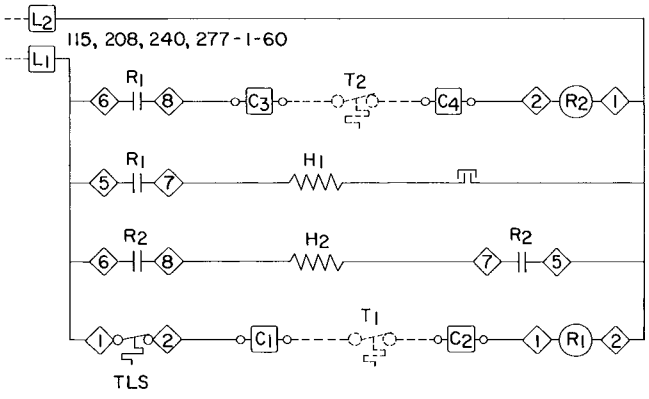
ELECTRICAL DATA

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

---- Field Wiring
—— Factory Wiring

□ 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

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.

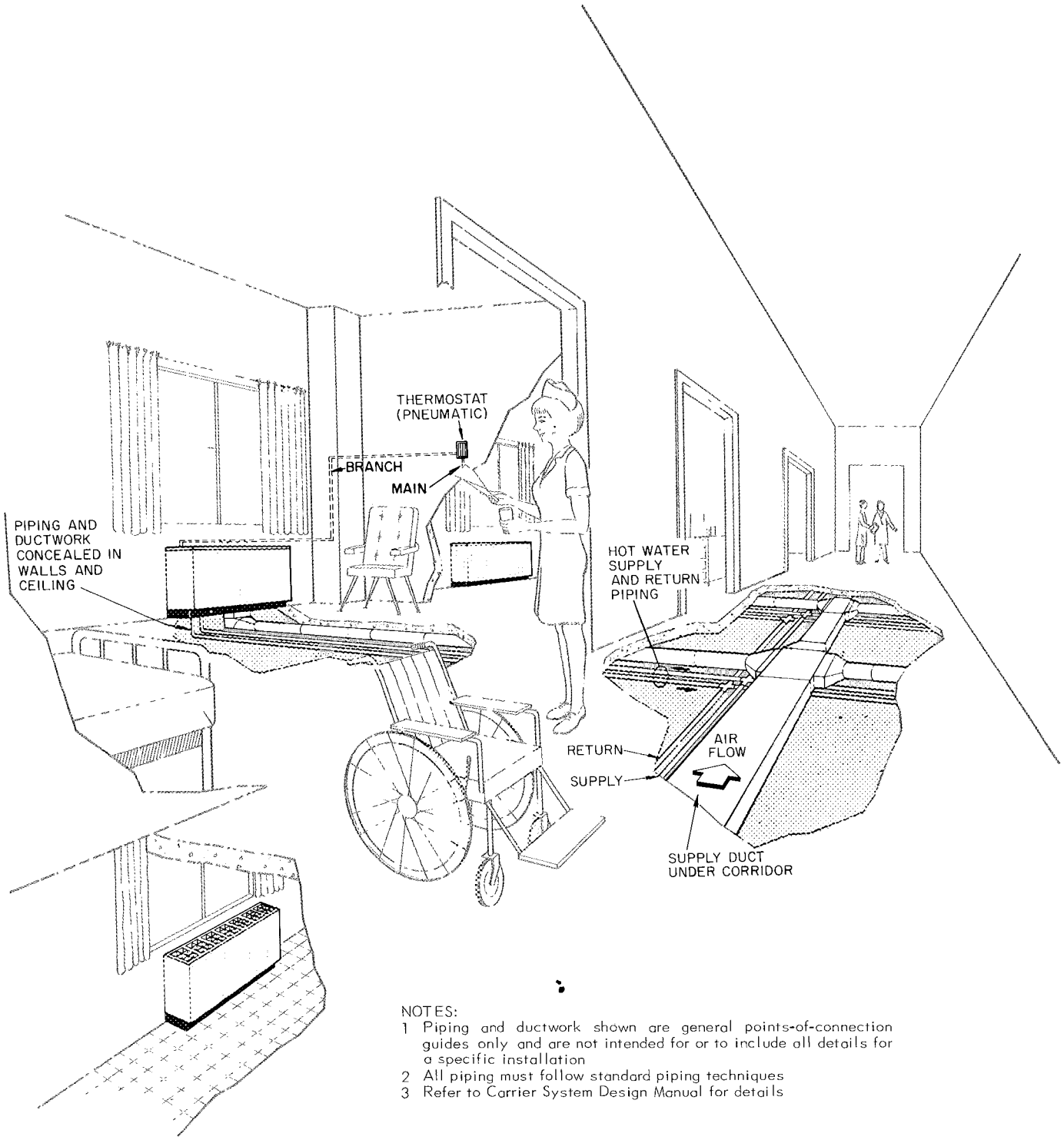
Thermostatic control (electric or pneumatic) is accomplished with a nonreversing direct acting thermostat (field supplied) and a normally open valve. This control arrangement is especially advantageous on 37KM units where emergency gravity heating is available in case of power failure.

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.

CARRIER AIR CONDITIONING COMPANY • SYRACUSE, NEW YORK