

Table 1 - Air handler selection

Select the air handler that exceeds the calculated heat loss for the space at the design supply water temperature

Model:	SD-12	SD-18	SD-24	SD-30	SD-36	SD-42	SD-48	SD-60
Minimum Number of 3" outlets	6	12	12	15	21	21	24	36
Heating capacity (Btu/h) @130F	16,000	24,000	37,000	40,000	49,000	54,000	63,000	66,000
Heating capacity (Btu/h) @140F	18,000	27,000	41,000	45,000	54,000	60,000	70,000	73,000
Heating capacity (Btu/h) @160F	23,000	34,000	52,000	57,000	70,000	77,000	93,000	96,000
Heating capacity (Btu/h) @180F	28,000	42,000	64,000	70,000	85,000	94,000	110,000	119,000
Air flow rate at high speed (cfm)	360	540	720	900	1080	1260	1440	1900
Cooling Capacity (Tons)	1.0	1.5	2.0	2.5	3.0	3.5	4.0	5.0
Blower Motor Full Load (Amps)	3.4	3.4	4.9	4.9	7.3	10	10	10
Circulator Full Load (Amps)	0.6	0.6	0.8	0.8	0.8	1.0	1.0	1.0
Cabinet Width	14"	14"	22"	22"	22"	22"	22"	22"
Cabinet Depth	20"	20"	22"	22"	22"	22"	22"	22"
Cabinet Height	24"	24"	31.5"	31.5"	31.5"	31.5"	31.5"	31.5"
Supply and Return air	12"x16"	12"x16"	20"x20"	20"x20"	20"x20"	20"x20"	20"x20"	20"x20"
Supply and Return water connections	1/2"	1/2"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Weight - air handler only (pounds)	70	70	100	100	100	110	110	110

Heating capacity based on 70F return air, high speed, 20F water temperature drop through the coil and 12.5 feet length per branch at 3 inch diameter

Table 2

Capacity Multipliers

Equivalent Flex Length	Multiplier (in heated space)	Multiplier (unheated space)
6 feet	1.25	1
12.5 feet	1	0.8
15 feet	0.8	0.6
20 feet	0.6	0.5
25 feet	0.5	0.4
>25 feet	N.R.	N.R.

Steps for sizing and selection:

1. Obtain room by room heat loss and/or heat gain
2. Determine heating temperature
3. Select air handler
4. Select outlets for each room
5. Determine duct layout
6. Assemble equipment list

Table 3 - Rigid duct Equivalents

Equivalent Length	Flex Duct Length	Rigid Duct Length	Total Duct Length
12.5	12.5	0	12.5
12.5	9	6	15
12.5	6	12	18
12.5	3	18	21
12.5	0	24	24

Table 4 - Main Section sizing

Main size (inches)	maximum main length				
	50 ft	100 ft	200 ft	300 ft	400 ft
	number of branches				
6	4	3	2	1	1
8	8	6	4	3	3
10	15	10	7	6	5
12	27	17	12	9	8
14	36	25	17	15	12
16	50	35	25	21	17
18	70	48	33	28	23