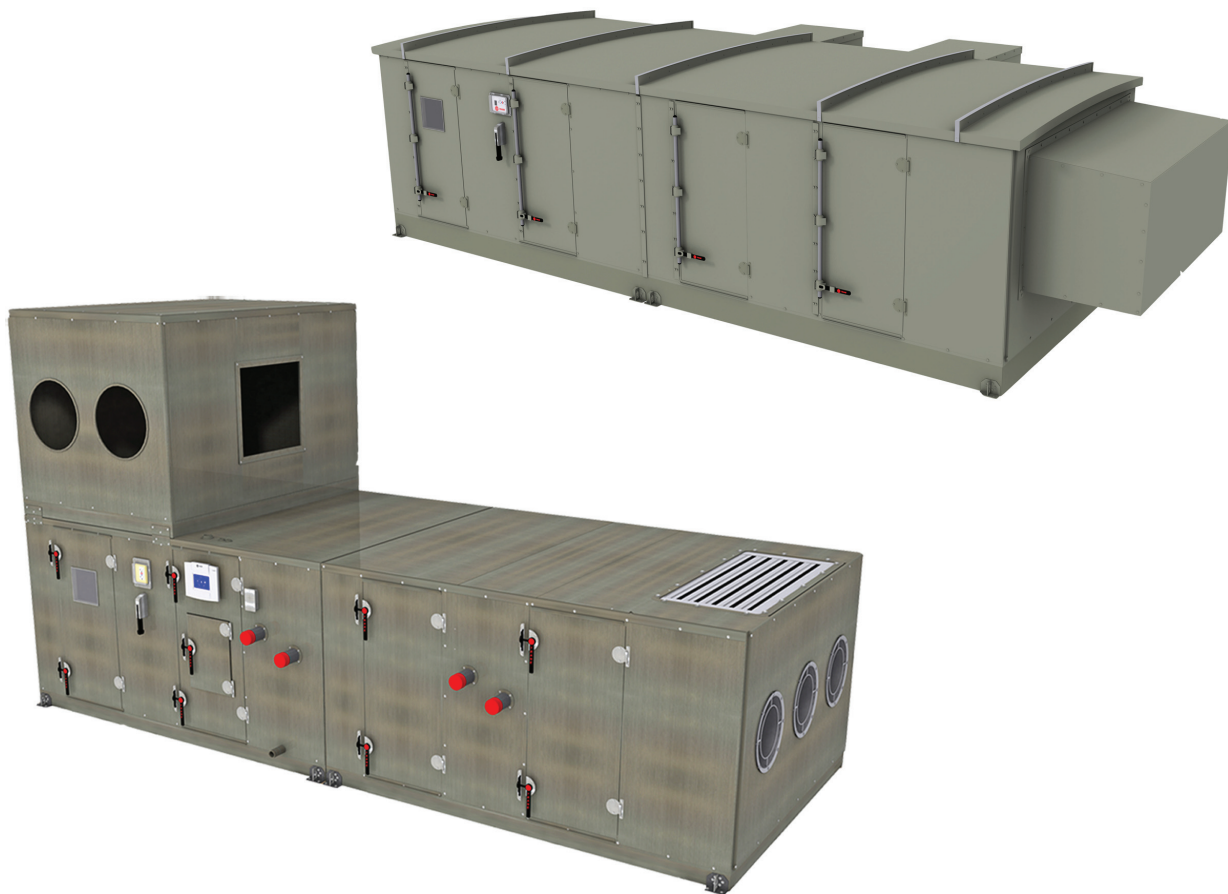




Quick Select

Performance Climate Changer™ Air Handlers

Sizes 3-120 for Indoor and Outdoor Units





Selection Procedure

Note: For specific dimensional and weight information, refer to the unit submittals. The dimensions and weights in this manual are approximate. Trane has a policy of continuous product and product data improvement and reserves the right to change design and specifications without notice.

1. Size the air-handling unit based on airflow through the cooling coil (see [Table 1](#)). The unique fin design of Trane coils enables cooling coil selections at velocities in excess of 625 fpm with no moisture carryover. The coil moisture carryover curves from tested data are built into the Trane Select Assist. Use this system to select coils.
2. Choose the coil section (see [Table 3](#)). Unit size, coil type, and coil rows determine the minimum coil section size required.
3. Select a filter type and check face velocities (see [Table 3](#)). The maximum recommended face velocity for pleated media, permanent, bag, and 12-inch cartridge filters is 625 fpm; for throwaway and HEPA filters, it is 500 fpm.

Note: If selecting an outdoor unit with an inlet hood, verify airflow limitations using [Table 4](#).

4. Design the basic air-handling system.
5. Estimate system static pressure requirements.
6. Total the overall air-handling unit dimensions and weights using [Table 5](#) and [Table 6](#).

Note: If selecting an outdoor unit, include external piping cabinet weight and dimensions. See [Table 5](#) and [Table 6](#).

7. Select a control system. Factory-mounted, -wired, and -tested end devices, starters, VFDs, and direct-digital, interoperable controllers are available to minimize construction cycles and job-site coordination.
8. Contact your local Trane sales office to order an air-handling system or to ask questions.

Table 1. Size the air handler based on airflow through the cooling coil

Coil Type	Unit Size	3	4	6	8	10	12	14
1/2-inch unit	Area (ft ²)	2.92	4.51	6.11	7.99	9.98	12.30	13.65
	Qty-Size	1-20 x 21	1-20 x 32.50	1-26.25 x 33.50	1-28.75 x 40	1-28.75 x 50	1-32.50 x 54.50	1-32.5 x 60.50
5/8-inch unit	Area (ft ²)	2.50	4.00	5.33	7.31	9.19	11.81	13.13
	Qty-Size	1-18 x 20	1-18 x 32	1-24 x 32	1-27 x 39	1-27 x 49	1-31.50 x 54	1-31.50 x 60
1-inch unit	Area (ft ²)	2.50	4.00	5.33	6.50	8.17	11.25	12.50
	Qty-Size	1-18 x 20	1-18 x 32	1-24 x 32	1-24 x 39	1-24 x 49	1-30 x 54	1-30 x 60
1/2-inch modified	Area (ft ²)	1.74	2.78	2.78	4.95	6.38	9.38	10.42
	Qty-Size	1-12.50 x 20	1-12.50 x 32	1-12.50 x 32	1-18.75 x 38	1-18.75 x 49	1-25 x 54	1-25 x 60
5/8-inch modified	Area (ft ²)	1.67	2.67	2.67	4.88	6.13	9.00	10.00
	Qty-Size	1-12 x 20	1-12 x 32	1-12 x 32	1-18 x 39	1-18 x 49	1-24 x 54	1-24 x 60
1-inch modified	Area (ft ²)	1.67	2.67	2.67	4.88	6.13	9.00	10.00
	Qty-Size	1-12 x 20	1-12 x 32	1-12 x 32	1-18 x 39	1-18 x 49	1-24 x 54	1-24 x 60

Table 1. Size the air handler based on airflow through the cooling coil (continued)

Coil Type	Unit Size	17	21	25	30	35	40	50
1/2-inch unit	Area (ft ²)	16.81	20.81	24.97	29.90	34.94	39.93	49.05
	Qty-Size	1-40 x 60.50	1-43.75 x 68.50	1-52.50 x 68.50	1-52.50 x 82	1-57.50 x 87.50	1-57.50 x 100	2-31.25 x 113
5/8-inch unit	Area (ft ²)	15.63	19.83	24.08	28.69	33.53	38.54	48.26
	Qty-Size	1-37.50 x 60	1-42 x 68	1-51 x 68	1-51 x 81	1-55.50 x 87	1-55.50 x 100	1-27 x 113 1-34.50 x 113
1-inch unit	Area (ft ²)	13.75	17.00	22.67	27.00	30.81	35.42	47.08
	Qty-Size	1-33 x 60	2-18 x 68	2-24 x 68	2-24 x 81	1-33 x 87 1-18 x 87	1-33 x 100 1-18 x 100	2-30 x 113
1/2-inch modified	Area (ft ²)	13.02	15.94	17.12	20.39	21.90	25.17	33.35
	Qty-Size	1-31.25 x 60	1-33.75 x 68	1-36.25 x 68	1-36.25 x 81	1-36.25 x 87	1-36.25 x 100	1-42.50 x 113
5/8-inch modified	Area (ft ²)	12.50	15.58	17.00	20.25	21.75	25.00	35.31
	Qty-Size	1-30 x 60	1-33 x 68	1-36 x 68	1-36 x 81	1-36 x 87	1-36 x 100	1-45 x 113
1-inch modified	Area (ft ²)	12.50	15.58	17.00	20.25	21.75	25.00	32.96
	Qty-Size	1-30 x 60	1-33 x 68	2-18 x 68	2-18 x 81	2-18 x 87	2-18 x 100	1-24 x 113 1-18 x 113
Coil Type	Unit Size	57	66	80	100	120		
1/2-inch unit	Area (ft ²)	56.89	65.63	78.75	99.14	118.10		
	Qty-Size	2-36.25 x 113	2-37.50 x 126	2-45 x 126	1-57.50 x 141 1-43.75 x 141	1-57.50 x 168 1-43.75 x 168		
5/8-inch unit	Area (ft ²)	56.50	65.63	78.75	99.88	119.00		
	Qty-Size	2-36 x 113	2-37.50 x 126	2-45 x 126	2-51 x 141	2-51 x 168		
1-inch unit	Area (ft ²)	51.79	60.38	73.50	94.00	96.00		
	Qty-Size	1-30 x 113 2-18 x 113	1-33 x 126 2-18 x 126	2-30 x 126 1-24 x 126	2-33 x 141 1-30 x 141	2-33 x 144 1-30 x 144		
1/2-inch modified	Area (ft ²)	44.14	51.41	63.44	77.11	91.88		
	Qty-Size	1-31.25 x 113 1-25 x 113	1-33.75 x 126 1-25 x 126	2-36.25 x 126	1-42.50 x 141 1-36.25 x 141	1-42.50 x 168 1-36.25 x 168		
5/8-inch modified	Area (ft ²)	42.38	49.88	63.00	76.38	91.00		
	Qty-Size	1-54 x 113	1-33 x 126 1-24 x 126	2-36 x 126	1-42 x 141 1-36 x 141	1-42 x 168 1-36 x 168		
1-inch modified	Area (ft ²)	42.38	49.88	60.38	76.38	78.00		
	Qty-Size	1-30 x 113 1-24 x 113	1-33 x 126 1-24 x 126	2-18 x 126 1-33 x 126	1-30 x 141 2-24 x 141	1-30 x 144 2-24 x 144		

Note: The area given is for the largest 5/8-inch coil per unit size. Other 5/8-inch unit coil areas are available; refer to product catalog CLCH-PRC015-EN or the TOPSS program.



Selection Procedure

Table 2. Size the coil section

Coil Type	Unit Size	Rows available						
		3-6	8-14	17-22	25,30	35,40	50-57	66-120
1/2-inch unit	Small	2-4	2-4	2-4	2-4	2-4	2	n/a
	Medium	2-8	2-8	2-8	2-8	2-8	2-4	2-4
	Extended-medium	2-8	2-8	2-8	2-8	2-8	2-8	2-8
	Medium large	2-8	2-8	2-8	2-8	2-8	2-8	2-8
	Medium large with access	2-6	2-6	2-6	2-6	2-4	2-4	n/a
	Large	2-8	2-8	2-8	2-8	2-8	2-8	n/a
	Large with access	2-8	2-8	2-8	2-8	2-8	2-8	n/a
	Large vertical	2-8	2-8	2-8 ^(a)	2-8 ^(a)	2-8 ^(a)	2-8 ^(a)	n/a
	Large vertical with access	2-8	2-8	2-8 ^(a)	2-8 ^(a)	2-8 ^(a)	2-8 ^(a)	n/a
5/8-inch unit and 1/2-inch modified	Small	1-2	1-2	1-2	1-2	1-2	1-2	n/a
	Medium	1-4	1-4	1-4	1-4	1-4	1-3	1-3
	Extended-medium	1-8	1-8	1-8 ^(b)	1-8 ^(b)	1-8 ^(b)	1-6	1-6
	Medium large	1-10	1-10	1-10	1-10	1-10	1-8	1-10
	Medium large with access	1-3	1-3	1-3 ^(c)	1-3 ^(c)	1-3	n/a	n/a
	Large	1-10	1-10	1-10	1-10	1-10	1-8	n/a
	Large with access	1-6	1-6	1-6	1-10 ^(d)	1-10	1-10	n/a
	Large vertical	1-6	1-6	1-6 ^(a)	1-10 ^(a)	1-6 ^(a)	1-6 ^(a)	n/a
	Large vertical with access	1-4	1-6	1-6 ^{(a)(c)}	1-10 ^(a)	1-6 ^(a)	1-6 ^(a)	n/a

- (a) Unit sizes 21-40 have a 6-row maximum for stacked coils.
 (b) 4-row maximum for unit size 21, 22.
 (c) 6-row maximum for coils. All CU fins are limited to 1-8 rows.
 (d) Large vertical not available for size 22, 26, 31, 36, 41, 57 and 58.

Table 3. Select filter type

Filter Type	Unit Size	3	4	6	8	10	12	14
Side-load 2-inch and 4-inch flat filter and 2-inch/4-inch high efficiency combination filter	Area (ft ²)	3.47	5.56	6.94	7.33	9.72	13.33	14.44
	Qty-Size	1 - 20x25	2 - 20x20	2 - 20x25	1 - 24x20 1 - 24x24	2 - 20x25 1 - 16x25	3 - 16x20 3 - 16x20	4 - 16x20 2 - 16x25
Side-load bag/cartridge filter and pre-filter	Area (ft ²)	5.56	8.89	8.89	11.11	13.89	16.67	18.06
	Qty-Size	2 - 16x25	4 - 16x20	4 - 16x20	4 - 20x20	4 - 25x20	6 - 20x20	2 - 20x25 4 - 20x20
Side-load bag/cartridge filter and pre-filter	Area (ft ²)	3.33	5.56	6.67	8.00	8.67	12.33	13.44
	Qty-Size	1 - 20x24	2 - 20x20	2 - 24x20	4 - 24x12	2 - 24x20 1 - 24x12	3 - 20x20 2 - 12x24	2 - 20x24 1 - 20x20 2 - 12x24
Front-load bag/cartridge filter and pre-filter	Area	2.00	2.00	6.00	6.00	8.00	10.00	10.00
	Qty-Size	1 - 12x24	1 - 12x24	1 - 24x24 1 - 24x12	1 - 24x24 1 - 24x12	2 - 24x24	1 - 24x12 2 - 24x24	1 - 24x12 2 - 24x24
Front-load HEPA filters	Area	2.00	2.00	6.00	7.00	9.00	10.00	10.00
	Qty-Size	1 - 12x24	1 - 12x24	1 - 24x24 1 - 24x12	1 - 24x30 1 - 24x12	1 - 24x30 1 - 24x24	2 - 30x24	2 - 30x24

Table 3. Select filter type (continued)

Filter Type	Unit Size	17	21	25	30	35	40	50
Side-load 2-in. and	Area (ft ²)	18.89	21.53	27.11	30.44	37.22	40.83	55.00
	Qty-Size	4 - 20x24 2 - 20x20	3 - 25x20 1 - 25x16 3 - 16x25	6 - 20x20 2 - 20x16 3 - 12x24	6 - 20x24 2 - 20x16 3 - 12x24	8 - 20x24 3 - 16x25 1 - 16x20	8 - 20x20 2 - 20x25 4 - 16x20 1 - 16x25	12 - 25x20 4 - 16x25 1 - 16x20
Side-load 2-in. and 4-in. angled filter	Area (ft ²)	28.89	33.33	50.00	56.67	63.33	70.00	100.00
	Qty-Size	4 - 16x25 8 - 16x20	12 - 25x16	18 - 25x16	6 - 16x25 18 - 16x20	18 - 16x25 6 - 16x20	6 - 16x25 24 - 16x20	36 - 20x20
Side-load bag/cartridge filter and pre-filter	Area (ft ²)	18.89	22.00	26.00	28.22	34.67	36.00	50.00
	Qty-Size	4 - 20x24 2 - 20x20	3 - 24x24 3 - 20x24	6 - 20x24 3 - 12x24	8 - 20x20 3 - 12x24	8 - 20x24 4 - 12x24	8 - 24x24 2 - 24x12	10 - 24x24 5 - 12x24
Front-load bag/cartridge filter and pre-filter	Area	14.00	18.00	24.00	28.00	34.00	38.00	50.00
	Qty-Size	2 - 12x24 1 - 24x12 2 - 24x24	3 - 12x24 3 - 24x24	6 - 24x24	2 - 12x24 6 - 24x24	3 - 12x24 2 - 24x12 6 - 24x24	3 - 12x24 8 - 24x24	5 - 12x24 10 - 24x24
Front-load HEPA filters	Area	14.00	21.00	24.00	28.00	30.00	37.00	46.00
	Qty-Size	2 - 24x30 2 - 12x24	3 - 30x24 3 - 12x24	4 - 24x30 2 - 24x12	4 - 24x30 2 - 24x24	3 - 24x30 3 - 30x24	3 - 24x30 1 - 24x12 4 - 30x24	6 - 24x30 2 - 24x24 4 - 12x24
Filter Type	Unit Size	57	66	80	100	120		
Side-load 2-in. and 4-in. flat filter and 2-in./4-in. high efficiency combination filter	Area (ft ²)	63.33	75.56	85.56	104.17	122.22		
	Qty-Size	12 - 20x25 3 - 20x20 4 - 16x25 1 - 16x20	20 - 20x24 4 - 20x16	20 - 20x24 4 - 20x16 5 - 12x24	30 - 20x25	32 - 25x20 4 - 25x16		
Side-load 2-in. and 4-in. angled filter	Area (ft ²)	100.00	113.33	151.11	166.67	194.44		
	Qty-Size	36 - 20x20	36 - 20x20 6 - 16x20	48 - 20x20 8 - 16x20	48 - 20x25	56 - 25x20		
Side-load bag/cartridge filter and pre-filter	Area (ft ²)	60.00	66.67	88.00	113.33	134.00		
	Qty-Size	15 - 24x24	20 - 20x24	20 - 24x24 4 - 24x12	28 - 24x20 4 - 24x12 6 - 12x24	28 - 24x24 4 - 24x12 7 - 12x24		
Front-load bag/cartridge filter and pre-filter	Area	60.00	66.00	86.00	106.00	124.00		
	Qty-Size	15 - 24x24	3 - 24x12 15 - 24x24	1 - 12x24 4 - 24x12 19 - 24x24	5 - 12x24 24 - 24x24	6 - 12x24 28 - 24x24		
Front-load HEPA filters	Area	57.00	66.00	76.00	102.00	119.00		
	Qty-Size	9 - 24x30 3 - 24x24	12 - 24x30 3 - 24x12	12 - 24x30 3 - 24x12 5 - 12x24	18 - 30x24 6 - 12x24	21 - 30x24 7 - 12x24		

Table 4. Inlet hood (outdoor units only) airflow limitations (cfm)

Unit Size	Back inlet hood	Mixing Section		Economizer Section
		1 side inlet hood	2 side inlet hoods	Single inlet hood
3	2257	1781	3563	1412
4	5567	1781	3563	2917
6	6016	2179	4358	3625
8	8847	2634	5268	4628
10	7050	3050	6100	5257



Selection Procedure

Table 4. Inlet hood (outdoor units only) airflow limitations (cfm) (continued)

Unit Size	Back inlet hood	1 side inlet hood	2 side inlet hoods	Single inlet hood
12	9393	3841	7681	12381
14	10,185	5582	11,163	6245
17	11,789	4870	9741	7124
21	14,716	6524	13,047	10,767
25	17,054	6917	13,834	11,457
30	22,694	7742	15,483	13,030
35	24,316	12,199	24,397	18,222
40	27,434	12,640	25,280	18,716
50	32,700	15,808	31,617	20,827
57	37,677	14,933	29,865	24,427
66	51,988	15,039	30,077	29,252
80	55,539	17,943	35,887	35,080
80 Traq	55,539	19,633	39,265	35,080
100	65,029	23,239	46,477	44,031
100 Traq	65,029	41,463	82,926	44,031
120	77,916	26,797	53,595	45,046
120 Traq	77,916	40,231	80,462	45,046

Table 5. Section dimensions (inches) and weights (pounds) - unit sizes 3-30

Nominal airflow ^(a)	1500	2000	3000	4000	5000	6000	7000	8500	10,500	11,000	12,500	13,000	15,000
Airflow at 625 fpm ^(b)	2169	3475	4338	4581	6075	8331	9025	11,806	13,456	13,194	16,944	18,231	19,025
Unit size	3	4	6	8	10	12	14	17	21	22	25	26	30
Height - indoor unit ^(c)	29.00	29.00	35.25	37.75	37.75	41.50	41.50	49.00	52.75	67.25	61.50	85.50	61.50
Width	31.50	44.00	44.00	50.50	61.50	66.50	72.00	72.00	80.00	61.50	80.00	61.50	93.50
Height for outdoor unit includes base drip lip ^(d)	36.25	36.38	42.63	45.13	45.13	49.25	49.25	56.75	60.50	n/a	69.25	n/a	69.25
Weight add for outdoor unit (lbs/in. of unit length)	1.66	1.91	1.91	2.04	2.27	2.40	2.51	2.51	2.68	n/a	2.68	n/a	2.94

(a) Nominal airflow is based on 500 fpm through a nominal coil (i.e. 500xunit size 8=4000 cfm)

(b) Airflow@625 fpm through the flat filter (maximum filter velocity).

(c) Height includes standard 2.5-inch base frame for sizes 3-57 and 6-inch base frame for sizes 66-120.

(d) Height includes 6-inch base frame for sizes 3-120.

Table 6. Section dimensions (inches) and weights (pounds) - unit sizes 31-120

Nominal airflow ^(a)	15,500	17,500	20,000	25,000	28,500	33,000	40,000	50,000	60,000
Airflow at 625 fpm ^(b)	22,138	23,263	25,519	34,375	39,581	47,225	53,475	65,106	76,388
Unit size	31	35	40	50	57	66	80	100	120
Height - indoor unit ^(c)	85.50	67.25	67.25	75.75	85.50	92.50	107.50	119.75	119.75
Width	72.00	100.00	112.50	125.50	125.50	140.50	140.50	154.50	182.00
Height for outdoor unit includes base drip lip ^(d)	n/a	75.00	75.00	84.38	94.13	97.63	112.63	124.88	124.88
Weight add for outdoor unit (lbs/in. of unit length)	n/a	3.02	3.28	3.73	6.12	2.57	2.57	2.80	3.25

(a) Nominal airflow is based on 500 fpm through a nominal coil (i.e. 500xunit size 8=4000 cfm).

(b) Airflow@625 fpm through the flat filter (maximum filter velocity).

(c) Height includes standard 2.5-inch base frame for sizes 3-57 and 6-inch base frame for sizes 66-120.

(d) Height includes 6-inch base frame for sizes 3-120.

Service Clearance Recommendations

A minimum clearance of the section width plus 12 inches on the access door side of the gas heat section is recommended for routine maintenance. This clearance provides enough room to replace the heat exchanger in the event of failure. The section side panels must be removed to access the heat handler. Refer to the following figure for service clearance recommendations for the air handler.

Figure 1. Service clearance

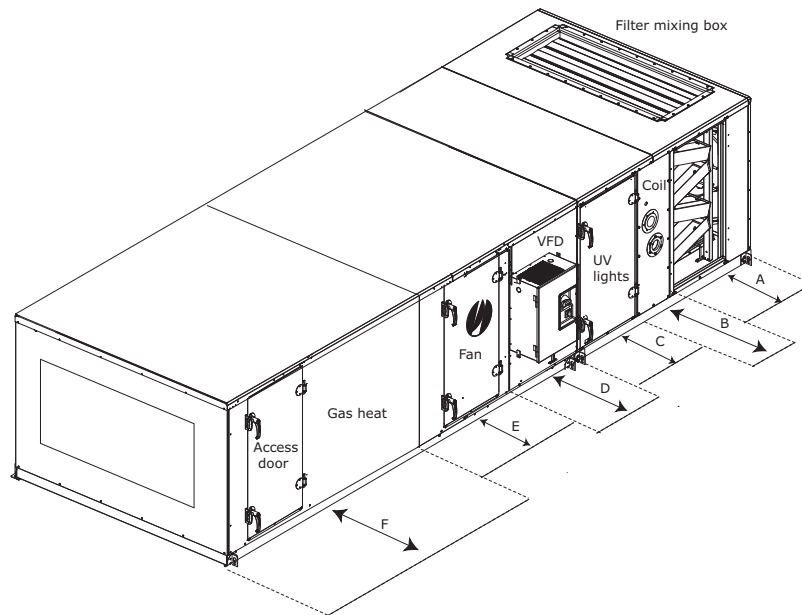


Table 7. Service clearance dimensions (inches)

Component	3	4	6	8	10	12	14	17	21	22	25	26	30
A (filter)	48	48	48	48	48	48	48	48	48	48	48	48	48
B (coil)	48	59	59	66	77	82	87	87	95	77	95	77	109
B (electric heat coil)	43	52	50	56	67	72	78	78	86	n/a	85	n/a	99
C (UV lights)	48	48	48	48	48	48	48	48	48	48	48	48	48
C (catalytic air cleaner)	43	59	59	63	75	81	83	83	58	75	58	75	83
D (external starter or VFD)	61	61	61	61	61	61	61	61	64	64	64	64	64
D (internal starter or VFD)	48	48	48	48	48	48	48	48	48	48	48	48	48
E (fan)	48	48	48	48	51	54	58	61	60	51	66	51	66
E (fan - MI Array)	25	25	25	25	32	32	32	32	32	32	32	32	32
F (gas heat - external vestibule)	n/a	n/a	89	90	108	100	100	105	115	n/a	115	n/a	118
F (gas heat - internal vestibule)	n/a	56	56	63	74	79	84	84	92	n/a	92	n/a	106

Selection Procedure

Table 7. Service clearance dimensions (inches) (continued)

Component	31	35	36	40	41	50	51	57	58	66	80	100	120
A (filter)	48	48	48	48	48	48	48	48	48	52	56	58	58
B (coil)	87	115	96	128	96	141	110	141	110	156	156	170	197
B (electric heat coil)	n/a	103	n/a	115	n/a	128	n/a	128	n/a	143	n/a	n/a	n/a
C (UV lights)	48	48	48	48	48	48	48	48	48	52	56	58	58
C (catalytic air cleaner)	83	75	59	83	83	83	83	83	83	83	83	75	83
D (external starter or VFD)	64	64	64	64	64	64	64	64	64	64	64	64	64
D (internal starter or VFD)	48	48	48	48	48	48	48	48	48	48	48	48	48
E (fan)	58	66	60	70	60	77	66	77	66	93	93	101	101
E (fan - MI Array)	32	32	32	32	32	32	32	32	32	32	32	32	32
F (gas heat - external vestibule)	n/a	136	n/a	140	n/a	156	n/a	156	n/a	170	179	180	n/a
F (gas heat - internal vestibule)	n/a	112	n/a	125	n/a	138	n/a	138	n/a	153	153	167	194

Note: At a minimum, the above clearance dimensions are recommended on one side of the unit for regular service and maintenance. Refer to as-built submittal for locations of items such as filter access doors, coil, piping connections, motor locations, etc. Sufficient clearance must be provided on all sides of unit for removal of access panels, plug panels, or section-to-section attachment brackets. Clearance for starters, VFDs, or other high-voltage devices must be provided per NEC requirements.

Figure 2. Service clearance for control box

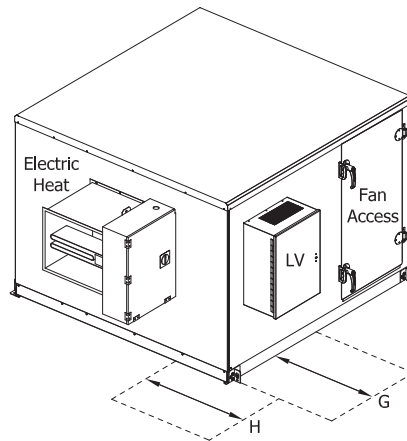


Table 8. Service clearance dimensions (inches) for control box

Component	Unit Size																		
	3	4	6	8	10	12	14	17	21	25	30	35	40	50	57	66	80	100	120
G (LV component - 18 pt term strip)	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
G (LV component - > 18 pt term strip)	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
H (electric heat duct mount)	48	48	48	48	48	48	48	48	48	48	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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