

INDUSTRIAL VENTILATION

A Manual of Recommended Practice
for Design

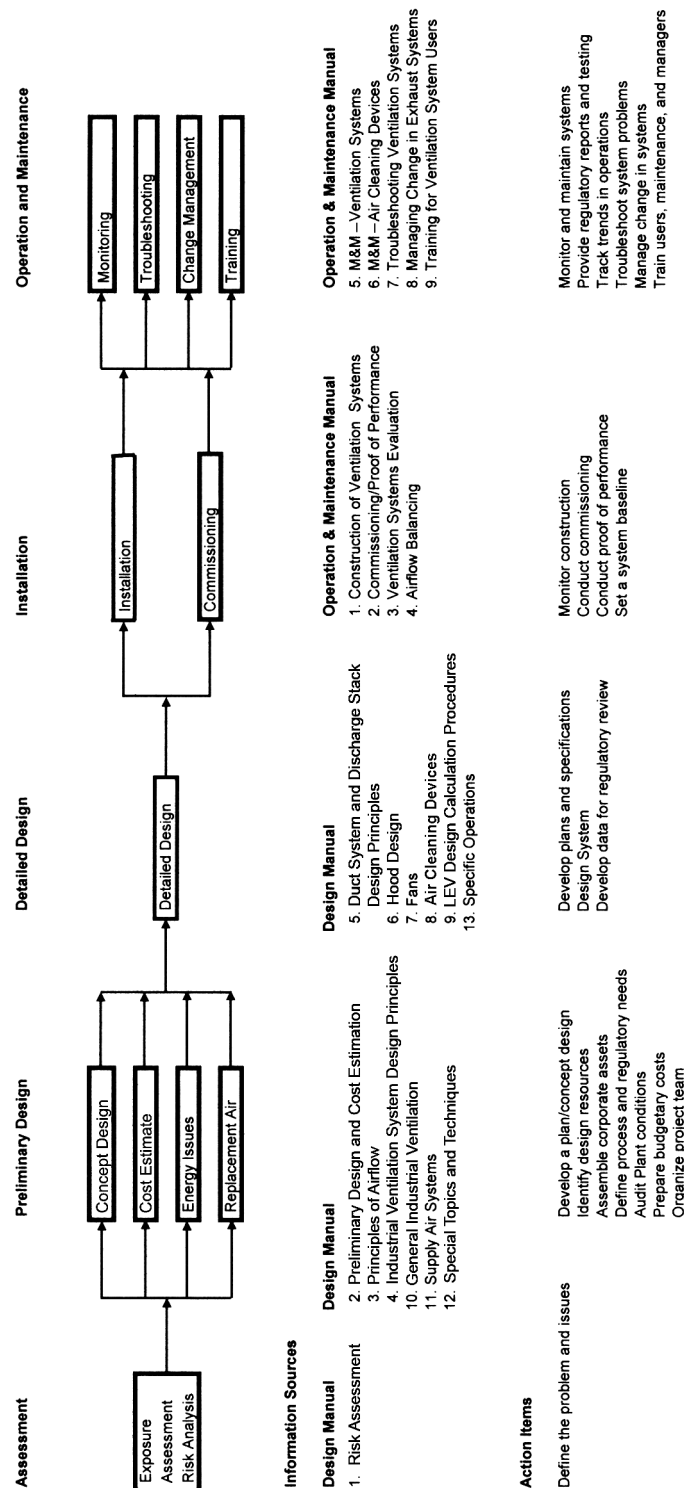
30th Edition



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LIFE CYCLE OF AN INDUSTRIAL VENTILATION SYSTEM



ACGIH®, *Industrial Ventilation: A Manual of Recommended Practice for Design*, 30th Edition
Errata Listing (as of 01/21/2020)

CHAPTER	SECTION	PAGE	DESCRIPTION
9	N/A	9-54	Table 9-7 (SI) has been corrected below. Do not use Table 9-7 (SI) as displayed in the 30th Edition of the ACGIH® publication, <i>Industrial Ventilation, A Manual of Recommended Practice for Design</i> as it is incorrect.
11	11.7.6	11-26	Replace last sentence of section with the following: The application of heat exchangers to industrial exhaust systems is discussed in Chapter 10 of the ACGIH® Publication, <i>Industrial Ventilation, A Manual of Recommended Practice for Operation and Maintenance</i> , which is to be published in 2020.
13	VS-95-30	13-197	Replace 3. with the following: 3. $Q_e = 50$ acfm [$0.025 \text{ am}^3/\text{s}$] at approximately 25" wg [6.3 kPa].
13	VS-95-31	13-198	Replace 2. with the following: 2. $Q_e = 50$ acfm at 25" wg [$0.025 \text{ am}^3/\text{s}$ at 6.3 kPa].

Table 9-7 (IP). Air Density Correction Factor (Temperature and Elevation Only), $df_T \times df_e$

ALTITUDE RELATIVE TO SEA LEVEL (ft)																
	-5,000	-4,000	-3,000	-2,000	-1,000	0	1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000
BAROMETRIC PRESSURE																
"Hg	35.7	34.5	33.3	32.1	31.0	29.9	28.9	27.8	26.8	25.8	24.9	24.0	23.1	22.2	21.4	20.6
"wg	485.9	469.5	453.2	436.9	421.9	406.9	393.3	378.4	364.7	351.1	338.9	326.6	314.4	302.1	291.3	280.4
Temp (F)	DENSITY FACTOR (df)															
-40	1.50	1.45	1.40	1.35	1.31	1.26	1.22	1.18	1.13	1.09	1.05	1.02	0.98	0.94	0.91	0.87
0	1.37	1.32	1.28	1.24	1.19	1.15	1.11	1.07	1.04	1.00	0.96	0.93	0.89	0.86	0.83	0.80
40	1.26	1.22	1.18	1.14	1.10	1.06	1.02	0.99	0.95	0.92	0.89	0.85	0.82	0.79	0.76	0.73
70	1.19	1.15	1.11	1.07	1.04	1.00	0.97	0.93	0.90	0.87	0.84	0.81	0.78	0.75	0.72	0.69
100	1.13	1.09	1.05	1.02	0.98	0.95	0.91	0.88	0.85	0.82	0.79	0.76	0.73	0.71	0.68	0.66
150	1.03	1.00	0.97	0.93	0.90	0.87	0.84	0.81	0.78	0.75	0.73	0.70	0.67	0.65	0.63	0.60
200	0.96	0.92	0.89	0.86	0.83	0.80	0.78	0.75	0.72	0.70	0.67	0.65	0.62	0.60	0.58	0.56
250	0.89	0.86	0.83	0.80	0.77	0.75	0.72	0.70	0.67	0.65	0.62	0.60	0.58	0.56	0.54	0.52
300	0.83	0.80	0.77	0.75	0.72	0.70	0.67	0.65	0.63	0.60	0.58	0.56	0.54	0.52	0.50	0.48
350	0.78	0.75	0.73	0.70	0.68	0.65	0.63	0.61	0.59	0.57	0.55	0.53	0.51	0.49	0.47	0.45
400	0.73	0.71	0.68	0.66	0.64	0.62	0.59	0.57	0.55	0.53	0.51	0.50	0.48	0.46	0.44	0.43
450	0.69	0.67	0.65	0.62	0.60	0.58	0.56	0.54	0.52	0.50	0.49	0.47	0.45	0.44	0.42	0.40
500	0.66	0.63	0.61	0.59	0.57	0.55	0.53	0.51	0.50	0.48	0.46	0.44	0.43	0.41	0.40	0.38
550	0.62	0.60	0.58	0.56	0.54	0.52	0.51	0.49	0.47	0.45	0.44	0.42	0.41	0.39	0.38	0.36
600	0.60	0.57	0.56	0.54	0.52	0.50	0.48	0.47	0.45	0.43	0.42	0.40	0.39	0.37	0.36	0.35
700	0.54	0.53	0.51	0.49	0.47	0.46	0.44	0.43	0.41	0.40	0.38	0.37	0.35	0.34	0.33	0.32
800	0.50	0.48	0.47	0.45	0.44	0.42	0.41	0.39	0.38	0.36	0.35	0.34	0.33	0.31	0.30	0.29
900	0.46	0.45	0.43	0.42	0.40	0.39	0.38	0.36	0.35	0.34	0.33	0.31	0.30	0.29	0.28	0.27
1000	0.43	0.42	0.40	0.39	0.38	0.36	0.35	0.34	0.33	0.31	0.30	0.29	0.28	0.27	0.26	0.25

Note that Table 9-7 (SI) has been corrected below. Do not use Table 9-7 (SI) as displayed in the 30th Edition of the ACGIH book, *Industrial Ventilation, A Manual of Recommended Practice for Design*, (i.e., the blue ventilation book) as it is incorrect.

Table 9-7 (SI). Air Density Correction Factor (Temperature and Elevation Only), $df_T \times df_e$

ALTITUDE RELATIVE TO SEA LEVEL (m)																
	-1500	-1200	-900	-600	-300	0	300	600	900	1200	1500	1800	2100	2400	2700	3000
BAROMETRIC PRESSURE																
mm Hg	905	875	845	816	787	760	733	707	682	658	634	611	589	567	546	526
kPa	120.7	116.6	112.6	108.7	105.0	101.3	97.8	94.3	91.0	87.7	84.6	81.5	78.5	75.6	72.8	70.1
Temp (C)	DENSITY FACTOR (df)															
-10	1.33	1.29	1.24	1.20	1.16	1.12	1.09	1.04	1.01	0.97	0.94	0.91	0.87	0.84	0.81	0.78
0	1.29	1.24	1.20	1.16	1.12	1.08	1.05	1.00	0.97	0.94	0.91	0.87	0.84	0.81	0.78	0.76
10	1.24	1.20	1.15	1.11	1.08	1.04	1.01	0.97	0.94	0.90	0.87	0.84	0.81	0.78	0.75	0.73
20	1.19	1.15	1.11	1.07	1.04	1.00	0.97	0.93	0.90	0.87	0.84	0.81	0.78	0.75	0.72	0.70
30	1.15	1.12	1.08	1.04	1.01	0.97	0.94	0.90	0.87	0.84	0.81	0.79	0.76	0.73	0.70	0.68
40	1.12	1.08	1.04	1.01	0.98	0.94	0.91	0.87	0.85	0.82	0.79	0.76	0.73	0.71	0.68	0.66
50	1.08	1.05	1.01	0.97	0.95	0.91	0.88	0.85	0.82	0.79	0.76	0.74	0.71	0.68	0.66	0.64
60	1.05	1.01	0.98	0.94	0.92	0.88	0.85	0.82	0.79	0.77	0.74	0.71	0.69	0.66	0.63	0.62
70	1.02	0.99	0.95	0.92	0.89	0.86	0.83	0.80	0.77	0.75	0.72	0.70	0.67	0.65	0.62	0.60
80	0.99	0.95	0.92	0.89	0.86	0.83	0.81	0.77	0.75	0.72	0.70	0.67	0.65	0.62	0.60	0.58
90	0.96	0.93	0.90	0.87	0.84	0.81	0.79	0.75	0.73	0.70	0.68	0.66	0.63	0.61	0.58	0.57
100	0.94	0.91	0.88	0.85	0.82	0.79	0.77	0.73	0.71	0.69	0.66	0.64	0.62	0.59	0.57	0.55
120	0.89	0.86	0.83	0.80	0.78	0.75	0.73	0.70	0.68	0.65	0.63	0.61	0.59	0.56	0.54	0.53
140	0.84	0.82	0.79	0.76	0.74	0.71	0.69	0.66	0.64	0.62	0.60	0.58	0.55	0.53	0.51	0.50
160	0.81	0.78	0.75	0.73	0.71	0.68	0.66	0.63	0.61	0.59	0.57	0.55	0.53	0.51	0.49	0.48
180	0.77	0.75	0.72	0.70	0.68	0.65	0.63	0.60	0.59	0.57	0.55	0.53	0.51	0.49	0.47	0.46
200	0.74	0.71	0.69	0.66	0.64	0.62	0.60	0.58	0.56	0.54	0.52	0.50	0.48	0.47	0.45	0.43
250	0.67	0.64	0.62	0.60	0.58	0.56	0.54	0.52	0.50	0.49	0.47	0.45	0.44	0.42	0.40	0.39
300	0.61	0.59	0.57	0.55	0.53	0.51	0.49	0.47	0.46	0.44	0.43	0.41	0.40	0.38	0.37	0.36
400	0.52	0.51	0.49	0.47	0.46	0.44	0.43	0.41	0.40	0.38	0.37	0.36	0.34	0.33	0.32	0.31
500	0.45	0.44	0.42	0.41	0.40	0.38	0.37	0.35	0.34	0.33	0.32	0.31	0.30	0.29	0.27	0.27
600	0.40	0.39	0.38	0.36	0.35	0.34	0.33	0.32	0.31	0.30	0.29	0.28	0.27	0.26	0.24	0.24
700	0.36	0.35	0.33	0.32	0.31	0.30	0.29	0.28	0.27	0.26	0.25	0.24	0.23	0.23	0.22	0.21

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