

Hauck Manufacturing Company

ENGINEERING INFORMATION

CORRECTION FACTOR TABLE

AIR TEMP (°F)	ALTITUDE (FT ABOVE SEA LEVEL)																						
	0	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	10000			
-60	.75	.77	.78	.80	.81	.83	.84	.86	.87	.89	.90	.92	.94	.96	.98	1.00	1.02	1.03	1.05	1.07	1.08	1.11	1.15
-40	.79	.81	.82	.84	.85	.87	.89	.90	.92	.93	.95	.97	.99	1.00	1.03	1.05	1.07	1.08	1.11	1.15	1.16	1.20	1.26
-20	.83	.85	.86	.88	.90	.91	.93	.95	.96	.98	1.00	1.01	1.04	1.05	1.08	1.09	1.12	1.14	1.16	1.20	1.22	1.26	1.26
0	.87	.89	.91	.92	.94	.96	.98	.99	1.01	1.03	1.05	1.06	1.09	1.10	1.13	1.15	1.17	1.19	1.22	1.26	1.26	1.26	1.26
40	.94	.96	.98	1.00	1.02	1.04	1.06	1.08	1.10	1.12	1.14	1.16	1.19	1.21	1.23	1.26	1.28	1.30	1.32	1.36	1.37	1.40	1.45
70	1.00	1.02	1.04	1.06	1.08	1.10	1.12	1.14	1.16	1.18	1.20	1.22	1.25	1.27	1.30	1.32	1.35	1.37	1.40	1.45	1.45	1.48	1.54
80	1.02	1.04	1.06	1.08	1.10	1.12	1.14	1.16	1.19	1.21	1.23	1.26	1.28	1.30	1.33	1.36	1.38	1.41	1.43	1.48	1.48	1.54	1.60
100	1.06	1.08	1.10	1.12	1.14	1.16	1.19	1.21	1.23	1.25	1.28	1.30	1.33	1.35	1.38	1.41	1.43	1.46	1.48	1.54	1.54	1.60	1.66
120	1.09	1.12	1.14	1.16	1.18	1.20	1.23	1.25	1.28	1.30	1.32	1.35	1.38	1.40	1.43	1.46	1.48	1.51	1.53	1.60	1.60	1.66	1.72
140	1.13	1.15	1.18	1.20	1.22	1.25	1.27	1.29	1.32	1.34	1.37	1.40	1.42	1.45	1.48	1.51	1.54	1.57	1.58	1.66	1.66	1.72	1.78
160	1.17	1.19	1.22	1.24	1.26	1.29	1.31	1.34	1.36	1.39	1.42	1.44	1.47	1.50	1.53	1.56	1.59	1.62	1.64	1.72	1.72	1.78	1.84
180	1.21	1.23	1.26	1.28	1.30	1.33	1.36	1.38	1.41	1.43	1.46	1.49	1.52	1.55	1.58	1.61	1.64	1.67	1.70	1.78	1.78	1.84	1.90
200	1.25	1.27	1.29	1.32	1.34	1.37	1.40	1.42	1.45	1.48	1.51	1.54	1.57	1.60	1.63	1.66	1.69	1.72	1.75	1.84	1.84	1.90	1.96

The above composite table shows density correction factors for temperature and altitude. Performance ratings shown in this bulletin have been calculated for standard air density of .075 lb./cu. ft. (70 °F @ 29.92 in. Hg barometric pressure). When density is other than standard, corrections for pressure and horsepower must be made.

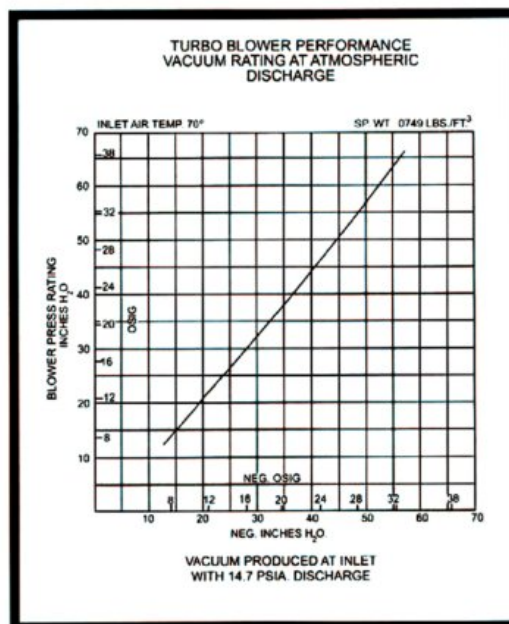
Example: Requirement—a blower to deliver 3850 cfm at 16 osi pressure at 120 °F and 2500 ft. altitude.

1. Density Correction table indicates a factor of 1.20 for 120 °F and 2500 ft. altitude.

2. 16 osi x 1.20 = 19.2 osi.
3. From capacity table on Page 3, select model TBA-20-30 (1.0 S.F.) showing a capacity of 3850 cfm @ 20.8 osi requiring a 30 HP motor at standard air.
4. Divide pressure and HP shown by 1.20 for performance at elevated temperature and altitude. Correct selection will deliver 3850 cfm at 17.3 osi at 120 °F and 2500 ft. altitude with a 25 HP motor. Select a TBA-20-30 with a 25 HP motor unless unit must start up cold, in which case use of a 30 HP motor is required.

PRESSURE CONVERSION TABLE

OSI to IN. WC				IN. WC to OSI			
OSI	* WC	OSI	* WC	* WC	OSI	* WC	OSI
1	1.73	36	62.28	1	.57	36	20.81
2	3.46	38	65.74	2	1.16	38	21.97
4	6.92	40	69.20	4	2.31	40	23.12
6	10.38	42	72.66	6	3.47	42	24.28
8	13.84	44	76.12	8	4.62	44	25.43
10	17.30	46	79.58	10	5.78	46	26.59
12	20.76	48	83.04	12	6.94	48	27.75
14	24.22	50	86.50	14	8.09	50	28.90
16	27.68	52	89.96	16	9.25	52	30.06
18	31.14	54	93.42	18	10.40	54	31.21
20	34.60	56	96.88	20	11.56	56	32.27
22	38.06	58	100.34	22	12.72	58	33.53
24	41.52	60	103.80	24	13.84	60	34.68
26	44.98	62	107.26	26	15.03	62	35.84
28	48.44	64	110.72	28	16.18	64	36.99
30	51.90	66	114.18	30	17.34	66	38.15
32	55.36	68	117.64	32	18.50	68	39.31
34	58.82	70	121.10	34	19.65	70	40.46



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	0	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	10000
-60	.75	.77	.78	.80	.81	.83	.84	.86	.87	.89	.90	.92	.94	.96	.98	1.00	1.02	1.03	1.06	1.09
-40	.79	.81	.82	.84	.85	.87	.89	.90	.92	.93	.95	.97	.99	1.00	1.03	1.05	1.07	1.08	1.11	1.15
-20	.83	.85	.86	.88	.90	.91	.93	.95	.96	.98	1.00	1.01	1.04	1.05	1.08	1.09	1.12	1.14	1.16	1.20
0	.87	.89	.91	.92	.94	.96	.98	.99	1.01	1.03	1.05	1.06	1.09	1.10	1.13	1.15	1.17	1.19	1.22	1.26
40	.94	.96	.98	1.00	1.02	1.04	1.06	1.08	1.10	1.12	1.14	1.16	1.19	1.21	1.23	1.26	1.28	1.30	1.32	1.36
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100	1.06	1.08	1.10	1.12	1.14	1.16	1.19	1.21	1.23	1.25	1.28	1.30	1.33	1.35	1.38	1.41	1.43	1.46	1.48	1.54
120	1.09	1.12	1.14	1.16	1.18	1.20	1.23	1.25	1.28	1.30	1.32	1.35	1.38	1.40	1.43	1.46	1.48	1.51	1.53	1.58
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180	1.21	1.23	1.26	1.28	1.30	1.33	1.36	1.38	1.41	1.43	1.46	1.49	1.52	1.55	1.58	1.61	1.64	1.67	1.70	1.75
200	1.25	1.27	1.29	1.32	1.34	1.37	1.40	1.42	1.45	1.48	1.51	1.54	1.57	1.60	1.63	1.66	1.69	1.72	1.75	1.81

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4	6.92	40	69.20	4	2.31	40	23.12
6	10.38	42	72.66	6	3.47	42	24.28
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