

**CARNES STEAM MANIFOLDS** are available in standard sizes from 18" x 12" through 72" x 48" in two inch increments. Additional special sizes are available.

Table 1 Return Air Conditions

°F		RH%							
		25	30	35	40	45	50	55	60
55	w	.0023	.0027	.0032	.0036	.0041	.0046	.0050	.0055
	v	13.02	13.03	13.04	13.05	13.06	13.07	13.08	13.09
60	w	.0027	.0033	.0038	.0044	.0049	.0055	.0060	.0066
	v	13.16	13.17	13.18	13.19	13.21	13.22	13.23	13.24
65	w	.0033	.0039	.0046	.0052	.0059	.0065	.0072	.0079
	v	13.30	13.31	13.33	13.34	13.35	13.37	13.38	13.40
70	w	.0039	.0046	.0054	.0062	.0070	.0078	.0086	.0094
	v	13.44	13.45	13.47	13.49	13.50	13.52	13.54	13.56
75	w	.0046	.0055	.0065	.0074	.0083	.0093	.0102	.0111
	v	13.61	13.63	13.65	13.67	13.69	13.71	13.73	13.75
80	w	.0054	.0065	.0076	.0087	.0098	.0109	.0120	.0130
	v	13.72	13.75	13.77	13.80	13.82	13.85	13.87	13.90
85	w	.0064	.0077	.0090	.0103	.0116	.0129	.0142	.0155
	v	13.87	13.90	13.93	13.96	13.99	14.02	14.05	14.08
90	w	.0075	.0090	.0105	.0121	.0136	.0152	.0167	.0183
	v	14.03	14.06	14.09	14.13	14.16	14.20	14.23	14.27

w = lb/lb    v = ft<sup>3</sup>/lb

Table 2 Outdoor Air Conditions

°F		RH%							
		20	30	40	50	60	70	80	90
0	w	.0002	.0002	.0003	.0004	.0005	.0005	.0006	.0007
	v	11.62	11.62	11.62	11.62	11.62	11.63	11.63	11.63
5	w	.0002	.0003	.0004	.0005	.0006	.0007	.0008	.0009
	v	11.75	11.75	11.75	11.75	11.75	11.76	11.76	11.76
10	w	.0003	.0004	.0005	.0007	.0008	.0009	.0010	.0012
	v	11.87	11.88	11.88	11.88	11.88	11.89	11.89	11.89
15	w	.0003	.0005	.0007	.0008	.0010	.0012	.0013	.0015
	v	12.00	12.00	12.01	12.01	12.01	12.02	12.02	12.02
20	w	.0004	.0006	.0009	.0011	.0013	.0015	.0017	.0019
	v	12.13	12.13	12.14	12.14	12.15	12.15	12.15	12.16
25	w	.0005	.0008	.0011	.0014	.0016	.0019	.0022	.0025
	v	12.26	12.26	12.27	12.27	12.28	12.28	12.29	12.29
30	w	.0007	.0010	.0014	.0017	.0021	.0024	.0028	.0031
	v	12.39	12.39	12.40	12.41	12.41	12.42	12.43	12.44
35	w	.0008	.0013	.0017	.0021	.0026	.0030	.0034	.0038
	v	12.52	12.53	12.53	12.54	12.55	12.56	12.57	12.58

w = lb/lb    v = ft<sup>3</sup>/lb

Table 3  
Relative Humidity at 55°F

w	RH%
.0005	5
.0009	10
.0014	15
.0018	20
.0023	25
.0027	30
.0032	35
.0037	40
.0041	45
.0046	50
.0050	55
.0055	60
.0060	65
.0064	70
.0069	75
.0074	80
.0078	85
.0083	90
.0087	95

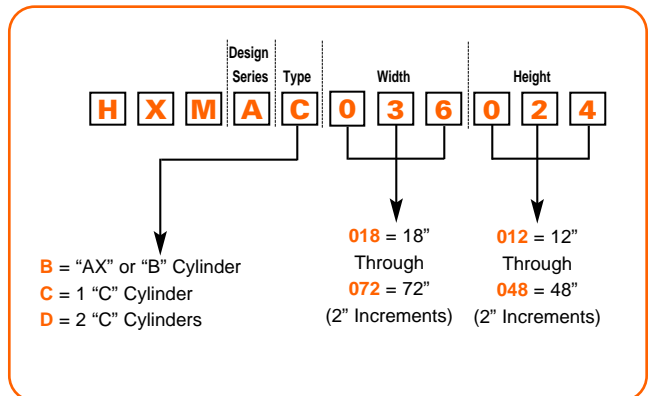
Table 4  
Non-Wetting Distance at 55°F

Change in RH%	500 fpm	750 fpm
5	4.2"	3.3"
10	4.5"	3.5"
15	4.9"	3.8"
20	5.3"	4.1"
25	5.7"	4.3"
30	6.2"	4.7"
35	6.7"	5.0"
40	7.3"	5.4"
45	7.7"	5.8"
50	8.6"	6.3"
55	9.4"	6.8"
60	10.2"	7.4"
65	11.2"	8.0"
70	12.2"	8.7"
75	13.3"	9.5"
80	14.6"	10.3"
85	16.0"	11.3"
90	17.5"	12.3"
95	19.1"	13.4"

Table 5  
Air Pressure Loss, "w.g."

500 fpm	.02
750 fpm	.07

Table 6 Model Numbering System



## Dimensions

Table 7

Duct Height	Tubes
012	3
014	4
016	4
018	5
020	5
022	6
024	6
026	7
028	8
030	8
032	9
034	10
036	10
038	11
040	12
042	12
044	13
046	14
048	15

