



TM

doublewall round noise attenuation

TYPE A

(doublewall acoustic) spiral pipe

The adjacent table lists the sound attenuation values in DB per foot. If the indicated sizes of Type A Spiral Pipe in straight runs under <no flow> conditions.

The per foot data shown is based on a 24 foot length in a straight run. Shorter length would show greater reduction on a per foot basis. The introduction of elbows as occurs in actual installations will provide additional attenuation and should be taken into account in the overall system design.

Testing was conducted in accordance with:

STANDARD METHOD OF TESTING DUCT LINER MATERIALS AND PREFABRICATED SILENCERS FOR ACOUSTICAL AND AIR FLOW PERFORMANCE.

ASTM DESIGNATION E 477-80

Tests were conducted on sizes as indicated by asterisks. The results were insertion loss by 1/3 octave and 1/1 octave bands which were converted into DB/FT for the table as shown. Interpolation and extrapolation provided the balance of the table.

Copies of individual reports are available on request.

Tests conducted on 22, 28 & 29 March 1983

Submitted 03/30/83 by:

FAGEN & ASSOCIATED, INC.
CONSULTANTS IN ACOUSTICS
695 CENTRAL AVE.
ST. PETERSBERG, FL 33701

noise attenuation in DB/FT by octave bands

DUCT DIA.	2	3	4	5	6	7
4	0.53	1.07	2.04	2.25	2.20	1.79
5	0.45	0.98	1.97	2.25	2.20	1.79
*6	0.40	0.90	1.90	2.25	2.20	1.79
7	0.37	0.83	1.83	2.25	2.20	1.79
8	0.34	0.77	1.76	2.25	2.20	1.79
9	0.32	0.72	1.69	2.25	2.20	1.79
10	0.30	0.68	1.62	2.25	2.20	1.79
11	0.28	0.64	1.55	2.25	2.20	1.79
*12	0.27	0.60	1.48	2.25	2.08	1.63
14	0.25	0.56	1.41	2.25	1.93	1.47
16	0.24	0.52	1.34	2.25	1.78	1.31
*18	0.23	0.48	1.30	2.25	1.60	1.16
20	0.22	0.46	1.26	2.12	1.43	1.09
22	0.21	0.44	1.23	2.00	1.28	1.04
*24	0.21	0.42	1.20	1.90	1.16	1.00
26	0.21	0.40	1.16	1.80	1.08	0.97
28	0.20	0.38	1.12	1.70	1.02	0.94
30	0.19	0.36	1.08	1.60	0.98	0.92
32	0.19	0.34	1.04	1.50	0.95	0.90
34	0.18	0.32	1.00	1.40	0.93	0.89
36	0.18	0.30	0.96	1.30	0.91	0.88
38	0.17	0.28	0.92	1.20	0.89	0.87
40	0.17	0.26	0.88	1.10	0.88	0.88
*42	0.16	0.25	0.84	1.00	0.87	0.87
44	0.16	0.24	0.81	0.91	0.86	0.86
46	0.16	0.23	0.78	0.82	0.85	0.85
48	0.15	0.22	0.76	0.74	0.84	0.84
50	0.15	0.22	0.74	0.68	0.83	0.83
52	0.15	0.21	0.72	0.60	0.82	0.82
54	0.15	0.21	0.70	0.53	0.81	0.81
56	0.14	0.21	0.68	0.46	0.81	0.81
58	0.14	0.20	0.66	0.40	0.80	0.80

NOTE: the table contains limiting values of attenuation per foot due to the flanking paths that are similar to what would occur under actual infield installed conditions