

Duct liner

Interior insulation material for sheet metal ducts

Atmosphere Duct Liner

- Sound absorption options ranging between 0.50 to 0.80 NRC
- Provides an optimum combination of efficient sound absorption, low thermal conductivity and minimal airstream surface friction.

- Eurofins Indoor Air Quality Gold Standard
- Zero Ozone Depletion Potential (ODP)
- Zero Global Warming Potential (GWP)



Products

Atmosphere™ Duct Liner is a flexible, mat-faced insulation bonded with ECOSE® Technology. It is faced with a tightly bonded mat to give the airstream a smooth, tough surface, resisting damage during installation and operation. The encapsulant edge coating eliminates airstream flaring.

Typical construction

Specifically designed as an interior insulation material for sheet metal ducts used in heating, ventilating and air conditioning. Provides an optimum combination of efficient sound absorption, low thermal conductivity and minimal airstream surface friction.

Installation

- Fabricate in compliance with the latest edition of NAIMA's Fibrous Glass Duct Liner Standard.
- Liner shall be folded and compressed in the corners of rectangular duct sections or shall be cut and fit to assure lapped, compressed joints. Longitudinal joints in

duct liner should not occur except at the corner of ducts. Longitudinal joints in liner shall be coated with adhesive. All damaged areas of the air stream surface shall be repaired with an adhesive which conforms to ASTM C 916.

- Liner should be adhered to the duct with 90% minimum area coverage of an adhesive which conforms to ASTM C 916.
- Mechanical fasteners should not compress the insulation more than 3mm, and shall be installed perpendicular to the duct surface. All fasteners should comply with the guidelines of NAIMA's Fibrous Glass Duct Liner Standard and the Mechanical Fastener's Standard MF-1-1975.
- Metal nosings shall be securely installed over transversely oriented liner edges facing the airstream at fan discharge, at access doors and at any interval of lined duct preceded by unlined duct. In addition, where velocities exceed 1219 mpm, metal nosing shall be used on upstream edges of liner at every transverse joint.

Performance

Fire

Duct Liner is tested to ASTM E84

Classification (UL723)	WGF
Flame spread	not over 25
Smoke developed	not over 50

Acoustic

Duct liner Roll has an NRC of 0.75

Duct Liner Roll Ultimate with 25 mm thickness has an NRC of 0.80

Duct Liner Roll Ultimate with 15 mm thickness has an NRC of 0.55

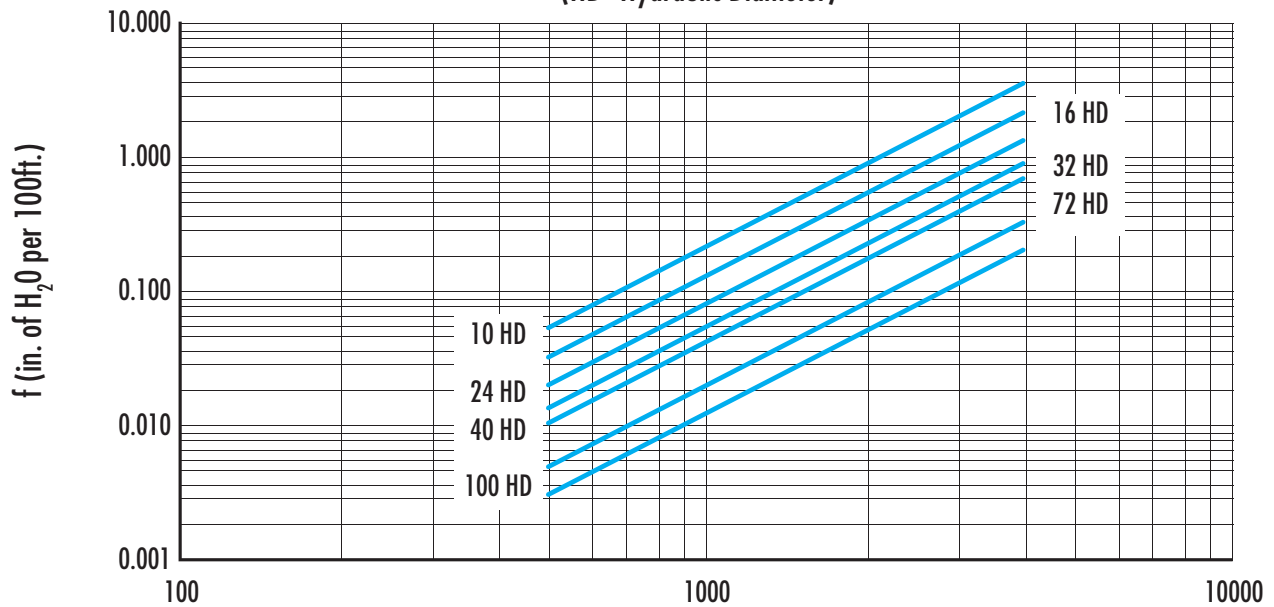
Duct Liner Slab with 25 mm thickness has an NRC of 0.80

Air Velocity (ASTM C 1071)

Duct Liner Roll and Slab are performed to a maximum Airvelocity of 1829 mpm (Tested to 4572 mpm)

Friction Loss

(HD=Hydraulic Diameter)



FPM	Hydraulic diameter						
Velocity	254mm	406mm	610mm	813mm	1016mm	1823mm	2540mm
500	0.054	0.030	0.018	0.012	0.009	0.005	0.003
600	0.077	0.042	0.025	0.018	0.013	0.007	0.004
700	0.104	0.057	0.034	0.024	0.018	0.009	0.006
800	0.134	0.074	0.044	0.031	0.023	0.011	0.008
900	0.169	0.093	0.056	0.039	0.029	0.014	0.010
1000	0.207	0.114	0.068	0.048	0.036	0.018	0.012
2000	0.806	0.443	0.266	0.186	0.141	0.069	0.046
3000	1.797	0.988	0.594	0.415	0.315	0.153	0.103
4000	3.179	1.748	1.050	0.734	0.557	0.271	0.181
5000	4.952	2.724	1.636	1.143	0.867	0.422	0.283

Mechanical fastener location		
Velocity/FPM (m/sec)	0 - 12.7	12.7 - 25.4
A From corners of duct	102mm	102mm
B From transverse of duct	76mm	76mm
C Across width of duct on centres (min 1/side)	305mm	152mm
D Across length of duct on centres (min 1/side)	457mm	406mm

Liner interior width		
No. Pins	Inches	(mm)
0	≤8	≤203
2	9-16	229-406
3	17-28	432-711
4	29-40	737-1016
5	41-52	1041-1321
6	53-64	1346-1626
7	65-76	1651-1930
8	77-88	1956-2235
9	89-100	2261-2540

