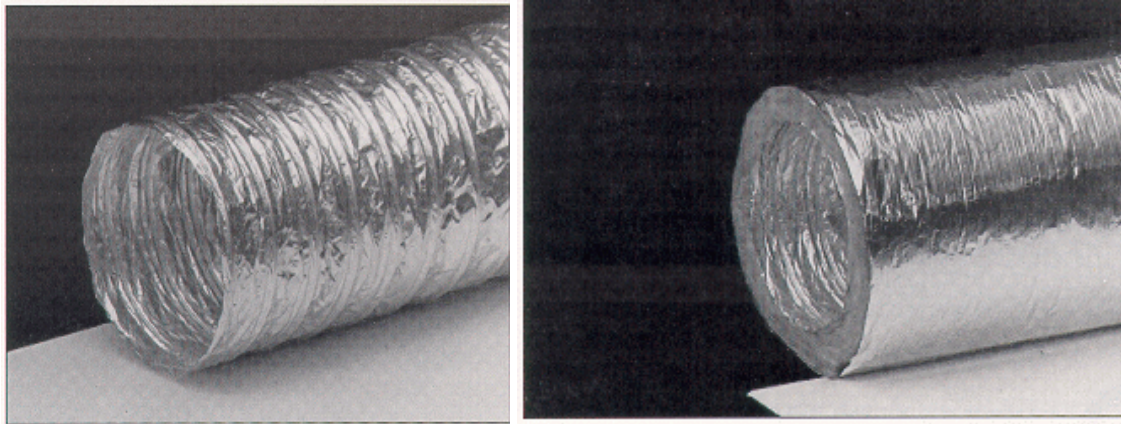


**ATCO'S FLEXIBLE DUCTS MEETING
BRITISH STANDARD 476 PARTS 5, 6, 7 & 20**

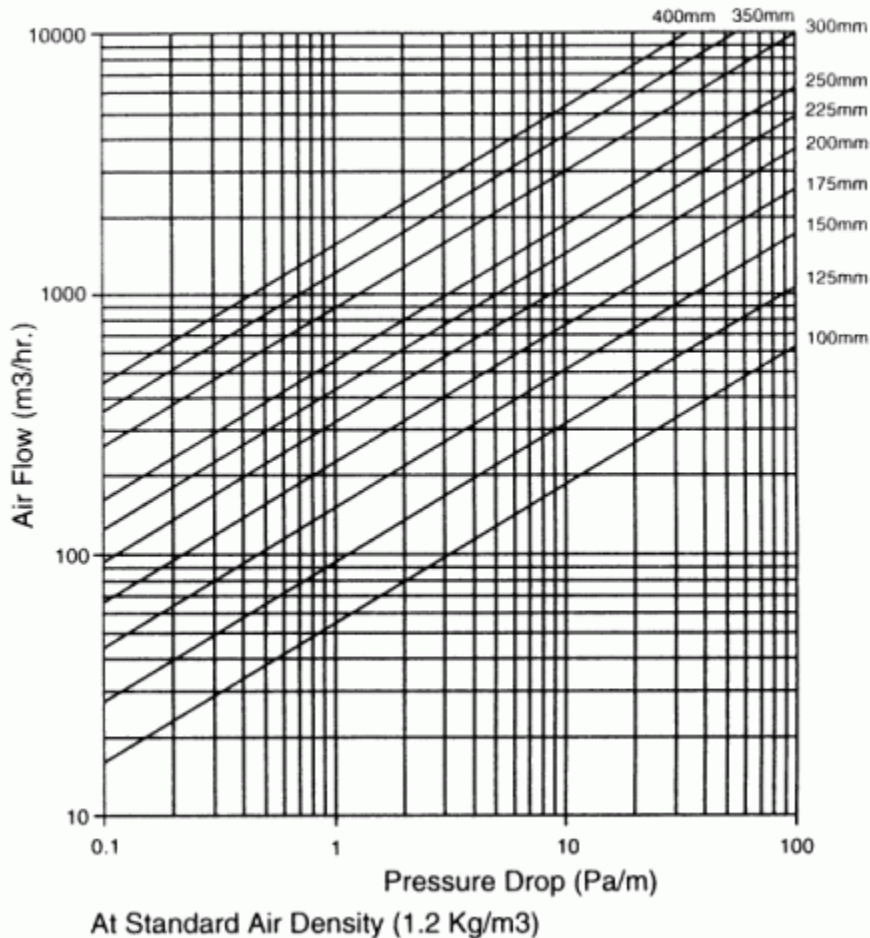


	ATR - 110 UNINSULATED ALUMINUM FOIL FLEXIBLE AIR DUCT	ATR - 111 INSULATED ALUMINUM FOIL FLEXIBLE AIR DUCT
DESCRIPTION	High quality uninsulated aluminum foil flexible air duct for use in commercial HVAC systems. Provides easy and fast installation with round or oval connections. Air tight constructions with smooth bore for low friction loss and lower operating cost.	High quality insulated aluminum foil flexible air duct using the ATR-110 inner core with a thick blanket of fiberglass insulation for energy efficiency and a tough reinforced outer jacket for resistance to tear and puncture.
CONSTRUCTION	2 plies of tough aluminum Foil/Polyester (Total of 4 plies) laminated with a flame retardant adhesive encapsulating a spring steel-wire helix.	
Inner core		
Fiberglass Insulation	N/A	12kg/m ³ Density, 32mm Thickness (Out of Package)
Outer Jacket	N/A	Aluminum vapor barrier consists of 2 plies of polyester laminated to a ply of aluminum foil and reinforced with Fiberglass Strand.
Temperature Range	-29°C to + 82°C	
	Diameters 100mm-250mm: 1.5kPa (positive) 0.19kPa (negative)	

Working Pressure	Diameters 300mm-500mm: 1.0kPa (positive) 0.19kPa (negative)	
Air Velocity	Maximum 25m/s	
Air Leakage	.002 m3/hr - m (Length) - mm (Diameter)	
Vapor Permeance	N/A	0.02 Perms.
Thermal Value (R)	N/A	Thermal Resistance (R Value): 0.72 (m2-C/W) at 24°C mean temperature.
Puncture Resistance	UL - 181 Puncture Test	
FIRE SAFETY TESTING BSA 476	Part 5 Ignitability : <10sec. Part 6 Fire Propagation: I=7.1, I ₁ =5.8, I ₂ =1.2, I ₃ =0.1 Part 7 Flame Spread: Class I Part 20 Fire Resistance Test: 2 Min.	<10 sec. I=8.6, I ₁ =5.8, I ₂ =2.2, I ₃ =0.6 Class I 30 Mins.
Size Availability	Diameters: 100mm-250mm in 25mm increments 300-500mm in 50mm increments Length: 7.6M. Standard For All Diameters	

Air Friction Loss

(Straight Lengths)



PRESSURE LOSS COEFFICIENTS (90° BENDS)

Centerline Bend			
Radius Ratio (R/D)	1.0	2.0	4.0
Loss Coefficient (Co) *	0.60	0.45	0.40

* Loss coefficients (Co) are used to calculate the pressure drop (Δp) caused by a bend using the following relations:

For Standard Air ($d = 1.2 \text{ kg/cu. m}$):

V_p (pascals) = (Velocity (m/s) / 1.3)

Δp (pascals) = $C_o \times V_p$

Friction loss data in straight and 90° bends was determined in accordance with Air Diffusion Council FD-72R1 Test Code.

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