

Flexible Insulated Duct

- Tough Mylar outer jacket
- Metalized-Mylar inner core
- Fully encapsulated spring steel wire
- Flame resistant dry lamination adhesive resin
- High and low pressure suitability
- Low resistance to airflow (correct installation)
- High resistance to waste permeation
- Significantly dampens mechanical vibrations
- Exceeds current fire requirements—see test compliance at bottom of page
- UV resistant

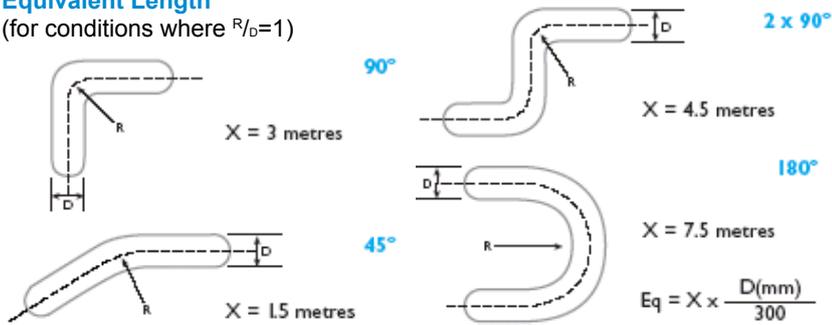


Flexible Insulated Duct

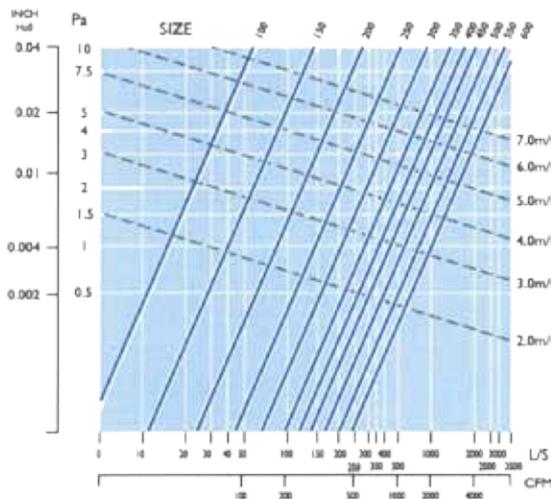
- Metalized Inner Core
- Polyester Insulation
- Metalized Outer Fire Jacket
- Operating Temperature: -20°C to +80°C
- Operation Pressure: -190pa to +1200pa
- General Use: Heating and cooling
- Domestic and commercial systems
- Complies with A.S. 4254:20122
- Test certificates available

Equivalent Length

(for conditions where $R/b=1$)



Performance Graph - Metalized Core Duct



Insulated Flex – Test Results

AS 1530 Part 3	Passed
UL 181 Burning	Passed
UL 181 Mould Growth	Passed
UL 181 High & Low Temperature	Passed
UL 181 Puncture	Passed
UL 181 Static Load	Passed
UL 181 Impact	Passed
UL 181 Pressure	Passed
UL 181 Collapse	Passed
UL 181 Tension	Passed

Test Compliance: Flexible Ductwork complies with the test requirements of AS4254-2012 & UL 181 standard for safety: Factory Made Air Ducts.

Scope of Supply:

Standard ex stock insulated flex has 25mm thick insulation. Available in 3m and 6m lengths in the following diameters (mm):

100	250	400	550
150	300	450	600
200	350	500	

Flex with 50mm thick insulation available to order.

Silent Flex also available.

Example:

- 5m Ø200 core at 100L/S
- Pressure Drop 1.4Pa/m
- Duct has one 90° bend with R/D=1
- Equivalent length – $3 \times 200/300 = 2m$
- Total Duct Static – $(2+5) \times 1.4 = 9.8Pa$

Test Compliance

Polyaire duct has been fully tested to comply with the Building Code of Australia 2005, AS4254:2012 and UL181

Total R Values

Firebreak 25 Rt = 0.6* (PY with 25mm polyester)

Firebreak 50 Rt = 1.0* (PYFB w 50mm polyester)

*Tests carried out by

- 1: BRANZ (Thermal resistance measurement)
- 2: Energy Analysis Consulting Pty Ltd (R value calculations for Polyaire Firebreak Duct)
- 3: AWTA-CSIRO (AS4254:2012/UL181)

Certificates available on request.

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Due to a policy of continuous development, prices and specifications are subject to change without notice.

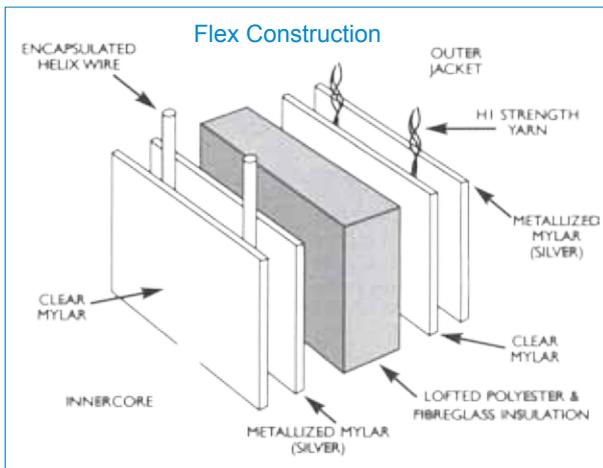
Christchurch 351c Blenheim Rd (From 2019: 264 Annex Rd), PO Box 8358 Riccarton 03 343 6184	Wellington 18 Armidale St, (PO Box 8358, Chch) Petone 04 566 7969	Auckland 6 Stanway Pl, PO Box 12-243 Penrose 09 579 3257	0800 SMOOTH (0800 766 684) www.smooth-air.co.nz sales@smooth-air.co.nz
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Insulated Flex (continued)
In-Duct Attenuation for Insulated Flex (25 thick)

ID	Distance		Octave Band Centre Frequency (Hz)							
	mm	m	63	125	250	500	1000	2000	4000	8000
150 (6")	1	1	1	4	9	17	21	24	16	11
	2	4	4	6	12	20	29	35	28	18
	3	6	6	8	17	32	35	39	36	24
200 (8")	1	2	2	2	9	16	19	24	12	6
	2	4	4	5	15	25	27	33	20	11
	3	6	11	11	20	32	31	37	29	16
250 (10")	1	3	1	4	12	18	22	22	11	8
	2	4	2	9	23	27	33	33	17	13
	3	5	5	14	28	33	40	40	24	20
300 (12")	1	0	1	5	12	14	17	17	8	6
	2	1	2	7	20	21	26	26	12	10
	3	2	4	12	24	26	32	32	18	14
350 (14")	1	0	2	6	10	12	14	14	6	6
	2	1	3	11	14	19	22	22	11	10
	3	2	5	15	18	23	28	28	16	14
400 (16")	1	0	1	3	9	14	14	14	6	4
	2	1	1	6	10	23	22	22	9	6
	3	1	2	9	21	29	28	28	14	11
450 (18")	1	1	1	4	9	12	14	14	6	5
	2	1	1	8	13	18	18	18	9	10
	3	2	2	10	17	21	25	25	13	12
500 (20")	1	0	1	2	7	11	9	9	3	4
	2	0	1	4	11	18	16	16	7	7
	3	1	2	8	14	22	20	20	8	9
550 (22")	1	0	0	3	5	10	7	7	2	4
	2	0	1	7	10	18	14	14	6	6
	3	1	2	13	13	25	18	18	8	9

Note:

- Noise data shown represents attenuation for particular distances from the start of the straight duct length, for duct support from hangers, i.e. in a free field background noise levels were always significantly below test results.
- All test results apply to duct that is installed in a fully extended state and has a maximum sag of 100mm between supports.



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