

Larewood Complete Building Services Ltd
Bury Business Centre
Kay Street
Bury
United Kingdom
BL9 6BU

Our Reference
01496/2/10/2

Subject
Plt Pretty Little Things
Wellington Mill

01 December 2021

For the attention of Tim Clare,

Further to your recent enquiry with regard to the above project, we have pleasure in submitting our Attenuator technical submittal for your consideration.

Enquiry Data

Our selections are based generally upon the following information provided to us by yourselves:

Specification sections	:	Section 3 - mechanical Specification - PLT MECH SPEC 17-0-20
Schedule numbers	:	
Drawing numbers	:	C00063M01 FIRST FLOOR VENT 081121 C00063M02 HVAC ROOF P2

We trust the enclosed meets with your approval, however should you require any further details or clarification then please do not hesitate to contact us.

Cross Talk Selections

Based on the information included with your enquiry Crosstalk attenuators have been selected using our Crosstalk attenuator estimation for control of speech levels between rooms based upon the internal noise levels specified. The source noise level is taken to be the raised speech sound power level as defined in SRL publication "Noise Control in Building Services" P216, figure 7.26, curve reference D.

Crosstalk attenuator selection is a very complex calculation if undertaken in full detail, to enable expedient selection our estimating software makes certain standardised assumptions which may not always reflect specific project conditions, we would therefore recommend that our selections are passed to the project acoustic consultant for approval.

Yours faithfully,

James Tingey

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Attenuator Schedule

Notes

1. Attenuators supplied by Caice.
2. Pressure losses are stated in accordance with ISO 7235, which is based on laminar airflow conditions. The system designer shall make allowance for increased attenuator pressure losses where turbulent airflow conditions exist on the attenuator entry or exit.
3. Unless stated otherwise all attenuators shall be constructed as follows: Galvanised sheet steel casings with 30mm profile flanges that are fully compliant with DW/TM1 at a high pressure rating (+2000/-750Pa). Profile flanges shall be compatible with Doby, Mez & Metu flanging systems. Elements shall be installed in the vertical plane, with side elements provided as standard, and all elements shall have aerodynamic inlet and outlet fairings. Element facings shall be constructed from expanded galvanised steel mesh with fibre glass tissue bonded to the inner face. Mineral wool infill shall be overpacked to minimise voids due to settlement. Attenuator ends shall be protectively wrapped, and all attenuators shall be delivered to site on pallets and individually labelled.

Ref.	Description	Type and Model Code	Dimensions (mm)			Vol (m³/s)	PL (Pa)	Qty	Features
			W	H	L				
ATT 05	SOUTH WC FAN SUCTION Room side	Circular PG01U/1K/L/	250	dia	915	0.15	0	1	Un-podded. 38mm long spigots. Low pressure rating (+500/-500Pa).
ATT 06	SOUTH WC FAN DISCHARG Atmosphere side	Circular PG01U/1K/L/	250	dia	615	0.15	0	1	Un-podded. 38mm long spigots. Low pressure rating (+500/-500Pa).
ATT 07	NORTH WC FAN SUCTION Room side	Circular PG01U/1K/L/	250	dia	915	0.15	0	1	Un-podded. 38mm long spigots. Low pressure rating (+500/-500Pa).
ATT 08	NORTH WC FAN DISCHARG Atmosphere side	Circular PG01U/1K/L/	250	dia	615	0.15	0	1	Un-podded. 38mm long spigots. Low pressure rating (+500/-500Pa).
ATT01	AHU02 SUPPLY Room side	Rectangular SG01V/3C/L/S	750	750	1500	2.70	28	1	
ATT02	AHU02 RETURN Room side	Rectangular SG01V/3C/L/S	750	750	1500	2.70	46	1	
ATT03	AHU01 SUPPLY Room side	Rectangular SG01V/3C/L/S	500	500	1050	1.00	17	1	
ATT04	AHU01 RETURN Room side	Rectangular LG01V/3C/L/S	500	500	1050	1.00	21	1	
CTA-01	MEETING - EXTRACT	Rectangular LG01V/3A/L/S	225	225	765	0.06	8	1	Spigot end connections.
CTA-02	MEETING - EXTRACT	Rectangular LG01V/3A/L/S	225	225	765	0.06	8	1	Spigot end connections.
CTA-03	MEETING - EXTRACT	Rectangular LG01V/3A/L/S	300	275	765	0.10	8	1	Spigot end connections.

Attenuator Schedule

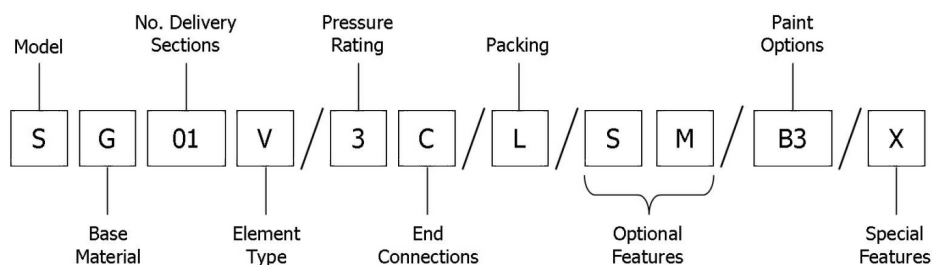
Ref.	Description	Type and Model Code	Dimensions (mm)			Vol (m³/s)	PL (Pa)	Qty	Features
			W	H	L				
CTA-04	MEETING - EXTRACT	Rectangular LG01V/3A/L/S	300	275	765	0.10	8	1	Spigot end connections.
CTA-05	MEETING - EXTRACT	Rectangular LG01V/3A/L/S	300	275	765	0.08	5	1	Spigot end connections.
CTA-06	MEETING - EXTRACT	Rectangular LG01V/3A/L/S	300	275	765	0.08	5	1	Spigot end connections.
CTA-07	OFFICE - EXTRACT	Rectangular LG01V/1E/L/S	250	225	620	0.06	8	1	200mm diameter spigot end connections. Low pressure rating (+500/-500Pa).
CTA-08	OFFICE - EXTRACT	Rectangular LG01V/1E/L/S	250	225	620	0.06	8	1	200mm diameter spigot end connections. Low pressure rating (+500/-500Pa).
CTA-09	MEETING - SUPPLY	Circular PG01U/1K/L/	250	dia	765	0.06	0	1	Un-podded. 38mm long spigots. Low pressure rating (+500/-500Pa).
CTA-10	MEETING - SUPPLY	Circular PG01U/1K/L/	250	dia	765	0.06	0	1	Un-podded. 38mm long spigots. Low pressure rating (+500/-500Pa).
CTA-11	MEETING - SUPPLY	Circular PG01U/1K/L/	315	dia	765	0.10	0	1	Un-podded. 38mm long spigots. Low pressure rating (+500/-500Pa).
CTA-12	MEETING - SUPPLY	Circular PG01U/1K/L/	315	dia	765	0.10	0	1	Un-podded. 38mm long spigots. Low pressure rating (+500/-500Pa).
CTA-13	MEETING - SUPPLY	Circular PG01U/1K/L/	250	dia	765	0.08	0	1	Un-podded. 38mm long spigots. Low pressure rating (+500/-500Pa).
CTA-14	MEETING - SUPPLY	Circular PG01U/1K/L/	250	dia	765	0.08	0	1	Un-podded. 38mm long spigots. Low pressure rating (+500/-500Pa).
CTA-15	OFFICE - SUPPLY	Circular PG01U/1K/L/	250	dia	765	0.12	0	1	Un-podded. 38mm long spigots. Low pressure rating (+500/-500Pa).
CTA-16	WC - EXTRACT	Circular PG01U/1K/L/	200	dia	465	0.08	0	1	Un-podded. 38mm long spigots. Low pressure rating (+500/-500Pa).
CTA-17	WC - EXTRACT	Circular PG01U/1K/L/	200	dia	465	0.03	0	1	Un-podded. 38mm long spigots. Low pressure rating (+500/-500Pa).
CTA-18	WC - EXTRACT	Circular PG01U/1K/L/	200	dia	465	0.06	0	1	Un-podded. 38mm long spigots. Low pressure rating (+500/-500Pa).

Attenuator Construction Code Definitions

Project: Plt Pretty Little Things Wellington Mill

Date: 01/12/2021

Sample Construction Code Format Diagram



Construction Code Definitions

Code Section	Code	Description
Model	L	Rectangular attenuator with LINING elements
	P	CIRCULAR attenuator with plain wrap casing
	S	Rectangular attenuator with SPLITTER elements
Base material	G	Standard gauge galvanised sheet steel
No. delivery sections	01 upwards	This number confirms how many sections will be delivered to site for each attenuator or splitter. For 02 or above assembly will be required by others
Element type	U	Un-podded (circular attenuators only)
	V	Elements installed in the vertical plane
Pressure rating	1	Low pressure (+500/-500Pa)
	3	High pressure (+2000/-750Pa)
End connections	A	Plain rectangular spigots matching the case width and height
	C	30mm profile flanges (profile flanges are compatible with Doby, Mez & Metu flanges)
	E	Circular spigot end caps
	K	38mm long circular spigots (circular attenuators only)
Packing	L	Lightweight pallet wrapping on casing ends (EG/IG units are palletised and wrapped on the pallet)
Optional features	S	Side elements (for EG/IG units these are supplied with steel backing)

Attenuator Drawings

Project: Plt Pretty Little Things Wellington Mill

Date: 01/12/2021

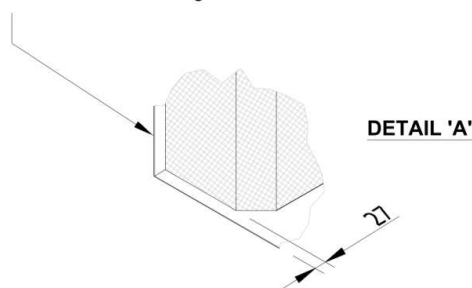
Construction Codes confirm the physical properties of each item. This drawing must therefore be read in conjunction with the Construction Code Definitions.
Dimensions W1, H1, W2, H2, WD1, HD1 are always shown as "inside-duct". Dimensions L1, L2, LD1 are always shown as "over connections".

LG lining attenuator - with spigot ends

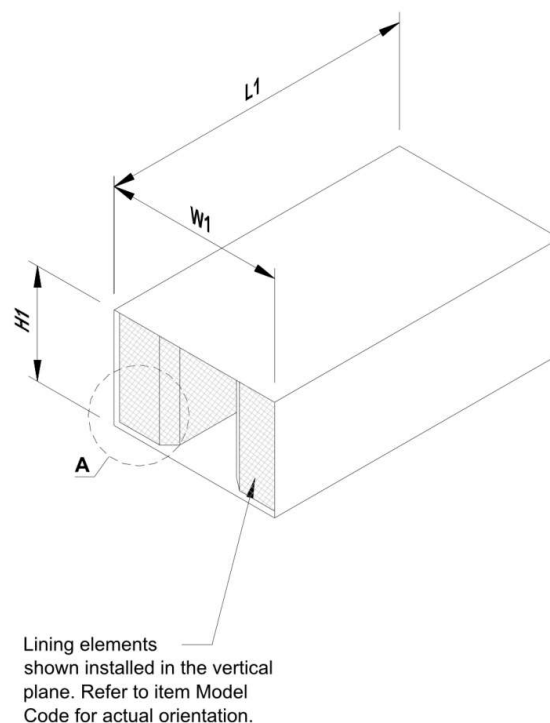
Notes:

1. Identification labels stating item reference and description to be provided on all items.
2. All dimensions in mm.
3. Tolerance on **W1**, **H1** and **L1** +/- 2mm

Plain spigot end connections.
Adjoining duct to be slip jointed
inside attenuator casing.



Lining elements set back in casing by 27mm and provided with aerodynamic fairings on inlet and outlet as shown. However if item has non-standard elements refer to Attenuator Model Code Definitions for details.



Ref.	Construction Code	Primary Dimensions			Paint Colour	Wt (Kg)	No. Off
		W1	H1	L1			
CTA-01	LG01V/3A/L/S	225	225	765		11	1
CTA-02	LG01V/3A/L/S	225	225	765		11	1
CTA-03	LG01V/3A/L/S	300	275	765		12	1
CTA-04	LG01V/3A/L/S	300	275	765		12	1
CTA-05	LG01V/3A/L/S	300	275	765		12	1
CTA-06	LG01V/3A/L/S	300	275	765		12	1

Attenuator Drawings

Project: Plt Pretty Little Things Wellington Mill

Date: 01/12/2021

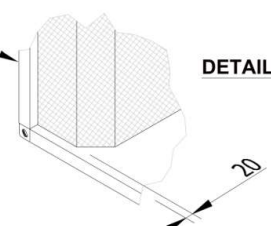
Construction Codes confirm the physical properties of each item. This drawing must therefore be read in conjunction with the Construction Code Definitions.
Dimensions W1, H1, W2, H2, WD1, HD1 are always shown as "inside-duct". Dimensions L1, L2, LD1 are always shown as "over connections".

LG lining attenuator - with profile flanges

Notes:

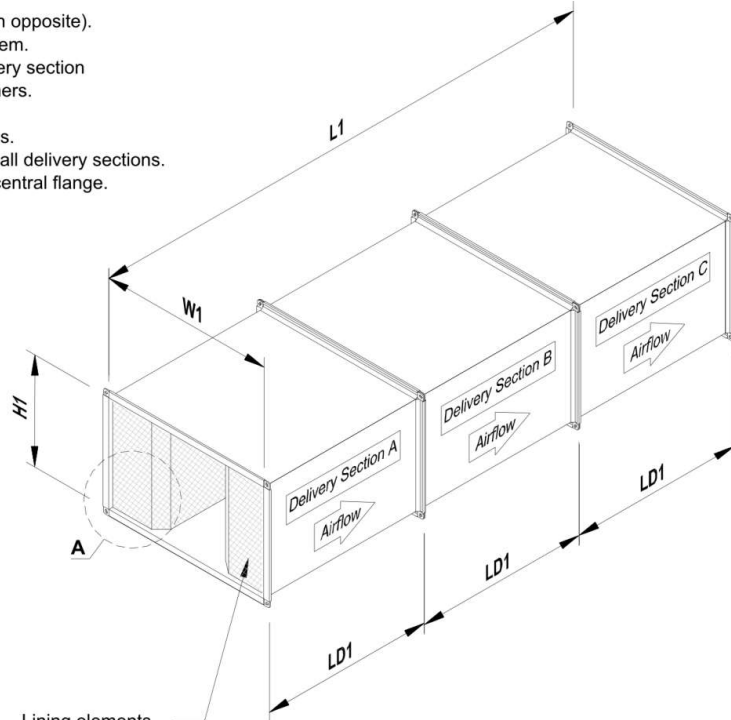
1. Attenuators may be delivered in 1, 2, 3 or 4 sections in length (3 shown opposite).
2. See **NDL** in table below for number of delivery sections in length per item.
3. Assembly of multiple piece items must be in accordance with the delivery section and airflow label layouts, typically as shown opposite. Assembly by others.
4. Nuts, bolts, flange clamps and gasket between flanges by others.
5. Delivery section and airflow labels only provided on multiple piece items.
6. Identification labels stating item reference and description provided on all delivery sections.
7. Where **LD1** exceeds 1250 each delivery section has an intermediate central flange.
8. All dimensions in mm.
9. Tolerances on **W1** & **H1** +/- 2mm.
10. Tolerances on **LD1** +/- 3mm

Profile flanges suitable for MEZ, DOBY or METU flanging systems. See table below for flange size.



DETAIL 'A'

Lining elements set back in casing by 20mm and provided with aerodynamic fairings on inlet and outlet as shown. However if item has non-standard elements refer to Attenuator Model Code Definitions for details.



Lining elements shown installed in the vertical plane. Refer to item Model Code for actual orientation.

Ref.	Construction Code	Primary Dimensions			Delivery Data		Flange Size	Paint Colour	Wt (Kg)	No. Off
		W1	H1	L1	LD1	NDL				
ATT04	LG01V/3C/L/S	500	500	1050	1050	1	30mm		31	1

Attenuator Drawings

Project:Plt Pretty Little Things Wellington Mill

Date:01/12/2021

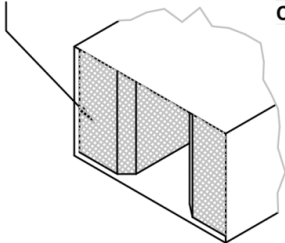
Construction Codes confirm the physical properties of each item. This drawing must therefore be read in conjunction with the Construction Code Definitions.
Dimensions W1, H1, W2, H2, WD1, HD1 are always shown as "inside-duct". Dimensions L1, L2, LD1 are always shown as "over connections".

LG lining attenuator - with circular spigot end caps

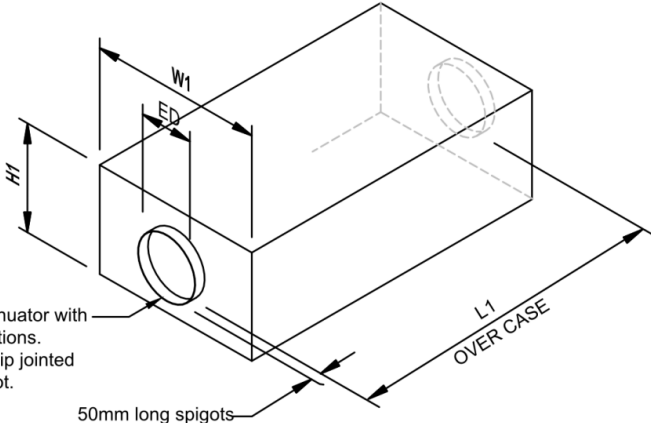
Notes:

1. Identification labels stating item reference and description to be provided on all items.
2. All dimensions in mm.
3. Tolerances on **W1** , **H1** and **ED** +/- 2mm.
4. Tolerances on **L1** over case +/- 2mm

Lining elements shown installed in the vertical plane. Refer to item Model Code for actual orientation.



Detail with End Cap Removed



Lining elements set back in casing by 20mm and provided with aerodynamic fairings on inlet and outlet as shown. However if item has non-standard elements refer to Attenuator Model Code Definitions for details.

Ref.	Construction Code	Primary Dimensions				Paint Colour	Wt (Kg)	No. Off
		W1	H1	L1	ED			
CTA-07	LG01V/1E/L/S	250	225	620	200		13	1
CTA-08	LG01V/1E/L/S	250	225	620	200		13	1

Page8 of 10

Document Package01496/2/10/2

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Attenuator Drawings

Project: Plt Pretty Little Things Wellington Mill

Date: 01/12/2021

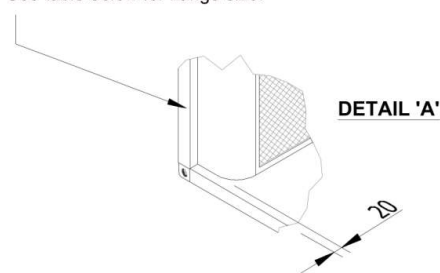
Construction Codes confirm the physical properties of each item. This drawing must therefore be read in conjunction with the Construction Code Definitions.
Dimensions W1, H1, W2, H2, WD1, HD1 are always shown as "inside-duct". Dimensions L1, L2, LD1 are always shown as "over connections".

SG splitter attenuator - with profile flanges

Notes:

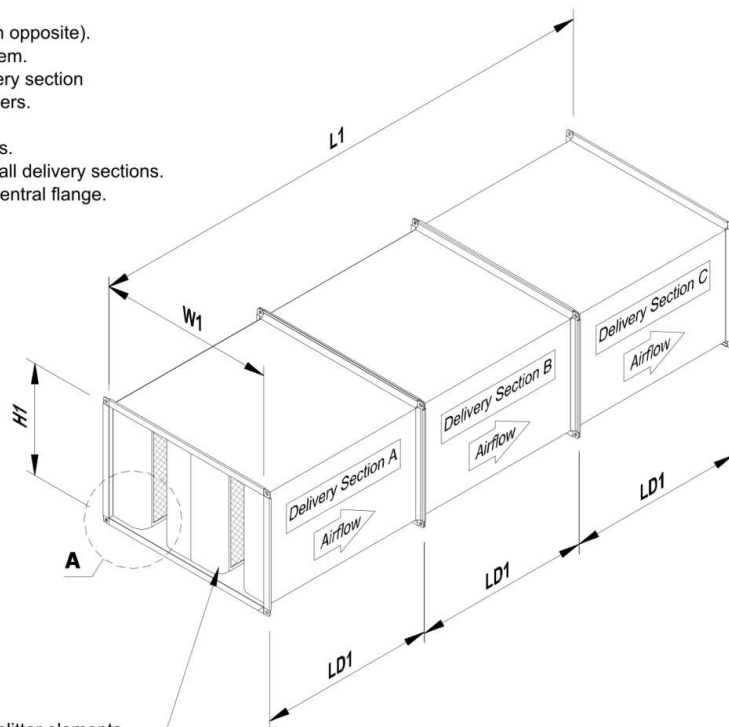
1. Attenuators may be delivered in 1, 2, 3 or 4 sections in length (3 shown opposite).
2. See **NDL** in table below for number of delivery sections in length per item.
3. Assembly of multiple piece items must be in accordance with the delivery section and airflow label layouts, typically as shown opposite. Assembly by others.
4. Nuts, bolts, flange clamps and gasket between flanges by others.
5. Delivery section and airflow labels only provided on multiple piece items.
6. Identification labels stating item reference and description provided on all delivery sections.
7. Where **LD1** exceeds 1250 each delivery section has an intermediate central flange.
8. All dimensions in mm.
9. Tolerances on **W1** & **H1** +/- 2mm.
10. Tolerances on **LD1** +/- 3mm

Profile flanges suitable for MEZ, DOBY or METU flanging systems. See table below for flange size.



Splitter elements set back in casing by 20mm and provided with aerodynamic bullnoses on inlet and outlet as shown. However if item has non-standard elements refer to Attenuator Model Code Definitions for details.

Splitter elements shown installed in the vertical plane. Refer to item Model Code for actual orientation.



Ref.	Construction Code	Primary Dimensions			Delivery Data		Flange Size	Paint Colour	Wt (Kg)	No. Off
		W1	H1	L1	LD1	NDL				
ATT01	SG01V/3C/L/S	750	750	1500	1500	1	30mm		87	1
ATT02	SG01V/3C/L/S	750	750	1500	1500	1	30mm		102	1
ATT03	SG01V/3C/L/S	500	500	1050	1050	1	30mm		37	1

Attenuator Drawings

Project: Plt Pretty Little Things Wellington Mill

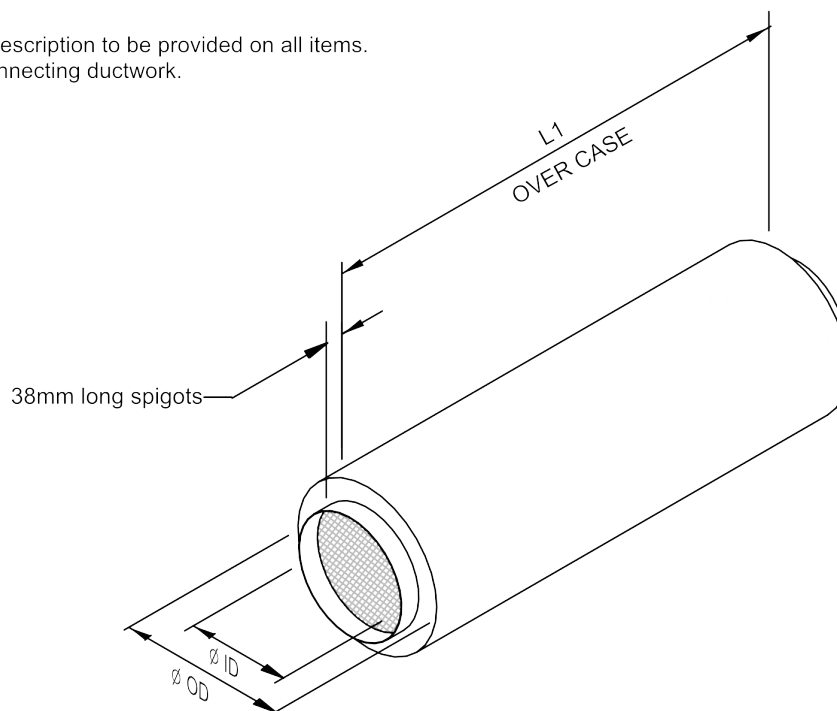
Date: 01/12/2021

Construction Codes confirm the physical properties of each item. This drawing must therefore be read in conjunction with the Construction Code Definitions.
Dimensions W1, H1, W2, H2, WD1, HD1 are always shown as "inside-duct". Dimensions L1, L2, LD1 are always shown as "over connections".

PG circular attenuator - with spigot ends

Notes:

1. Identification labels stating item reference and description to be provided on all items.
2. Attenuator spigots shall be slip jointed inside connecting ductwork.
3. All dimensions in mm.
4. Tolerance on L1 +/- 2mm
5. Tolerance on ID +/- 2mm



Ref.	Construction Code	Primary Dimensions			Paint Colour	Wt (Kg)	No. Off
		ID	OD	L1			
ATT 05	PG01U/1K/L/	250	355	915		14	1
ATT 06	PG01U/1K/L/	250	355	615		10	1
ATT 07	PG01U/1K/L/	250	355	915		14	1
ATT 08	PG01U/1K/L/	250	355	615		10	1
CTA-09	PG01U/1K/L/	250	355	765		12	1
CTA-10	PG01U/1K/L/	250	355	765		12	1
CTA-11	PG01U/1K/L/	315	420	765		14	1
CTA-12	PG01U/1K/L/	315	420	765		14	1
CTA-13	PG01U/1K/L/	250	355	765		12	1
CTA-14	PG01U/1K/L/	250	355	765		12	1
CTA-15	PG01U/1K/L/	250	355	765		12	1
CTA-16	PG01U/1K/L/	200	305	465		7	1
CTA-17	PG01U/1K/L/	200	305	465		7	1
CTA-18	PG01U/1K/L/	200	305	465		7	1