

KDS/05606_R01

21 December 2005

Gmamco
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BY FAX (04 - 3476963)

For the attention of Mr Tareq Marwan

Dear Sirs,

PROJECT: VOLUME CONTROL DAMPER PRESSURE DROP & LEAKAGE
SUBJECT: TEST RESULTS

Further to the testing of the volume control damper on 20 December 2005, we hereby submit the test results as follows:

Damper under test: 20Ga Frame & 16Ga Blade. Size 500x500 mm.

Test No.1

Leakage rate of damper in closed position at different pressures

No.	Pressure Setting - Pascals	Leakage Rate - L/S
1	125	3.6
2	250	5.4
3	375	6.8
4	500	7.7
5	750	9.79
6	1000	11.48
7	1500	14.10
8	2000	16.6

Test No.2

Pressure drop across fully open damper at different volumes

No.	Air Volume - L/S	Air Velocity - M/S	Pressure Drop - Pascals
1	1062 (Measured)	4.25	3
2	1278 (Measured)	5.11	4.5
3	2500 (Calculated)	10.0	16.5
4	3750 (Calculated)	15.0	37.4
5	5000 (Calculated)	20.0	66.3

Note: Pressure drops for No.1 & 2 are measured values. Pressure drops for No. 3, 4 & 5 are calculated values for demonstration purposes.

Test No.3

Leakage rate of damper and duct with sealed duct at different pressures

No.	Pressure Setting - Pascals	Leakage Rate – L/S
1	250	0.95
2	500	1.48
3	750	2.0
4	1000	2.5
5	1500	3.15
6	2000	3.8

Test instrumentation:

1. Duct leakage tester – Airflow LVLT
2. Micromanometer – DMP TT570S

Yours faithfully,
CML International


Kevin Savage
General Manager

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