Lucerne University of
Applied Sciences and Arts
HOCHSCHULE
LUZERN
Technik & Architektur
Zentrum für Integrale Gebäudetechnik

Testing laboratory HVAC

Test report No.: HP-07654-e

Objective: **Pressure loss measurements on air distribution system Roomair**

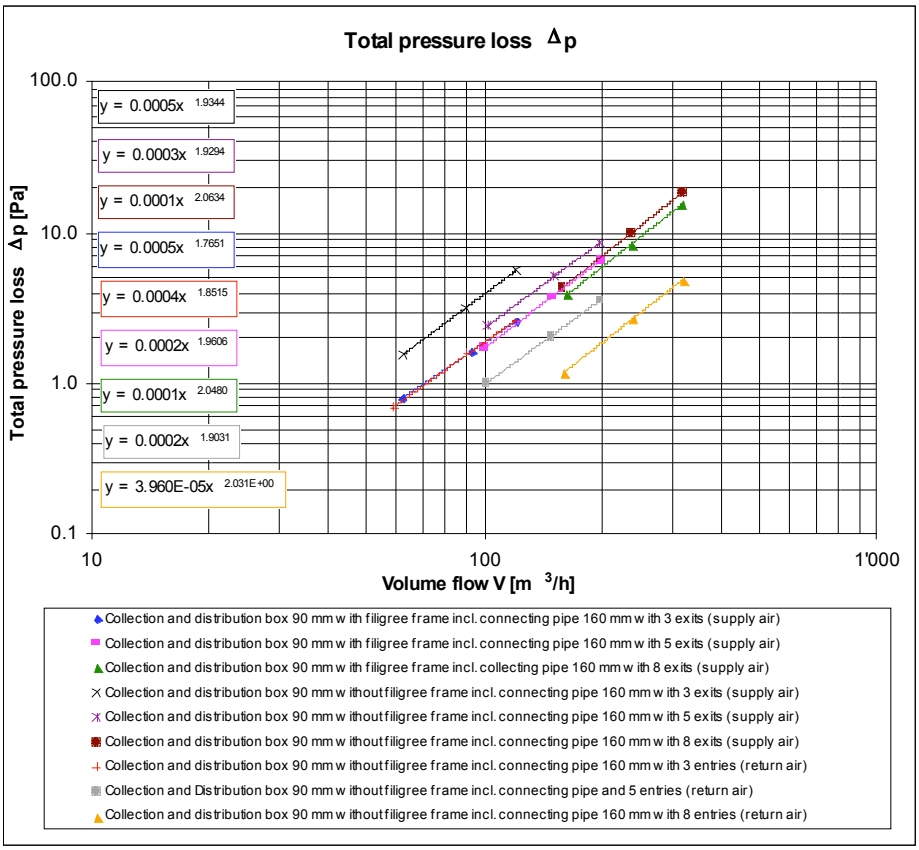
Client: **Roomair**
Thurstrasse 14
CH-8501 Frauenfeld

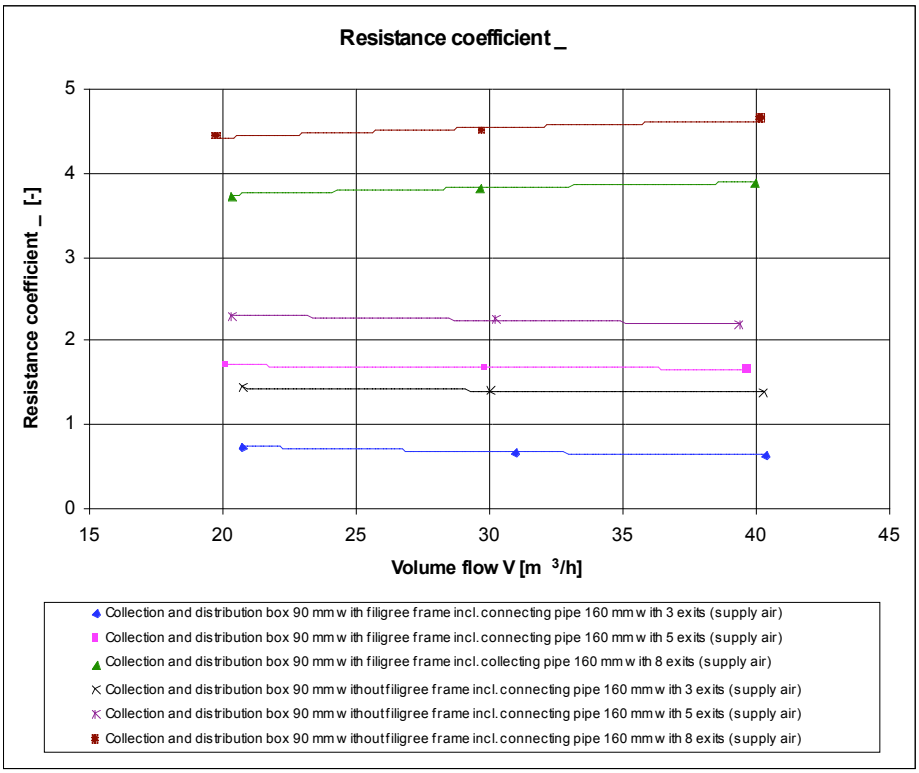
Date: **2007-12-11**

Contents

1.1. Summary air collection and distribution box, connecting pipe 90 mm

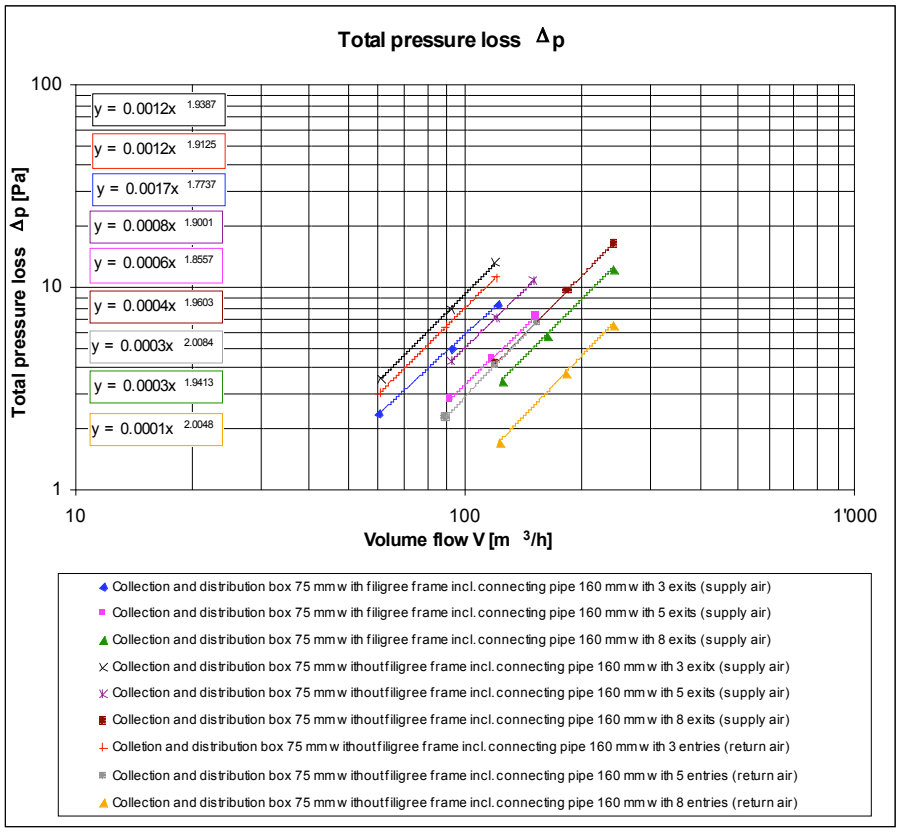
The resistance coefficient in the diagram refers to the exit speed w_2 at position 2.

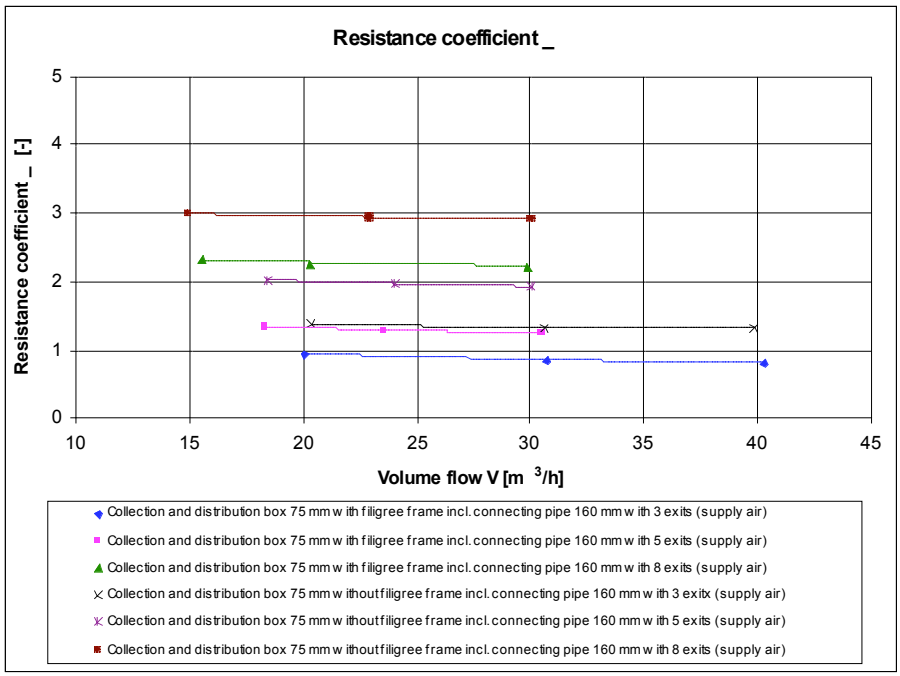




1.2. Summary air collection and distribution box, connecting pipe 75 mm

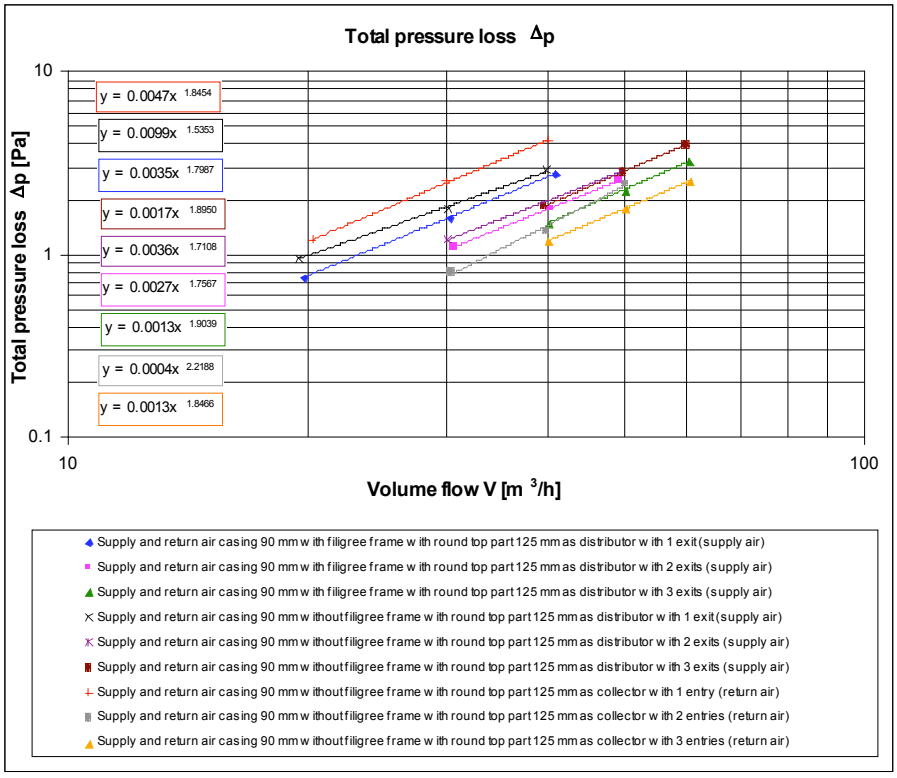
The resistance coefficient in the diagram refers to the exit speed w_2 at position 2.

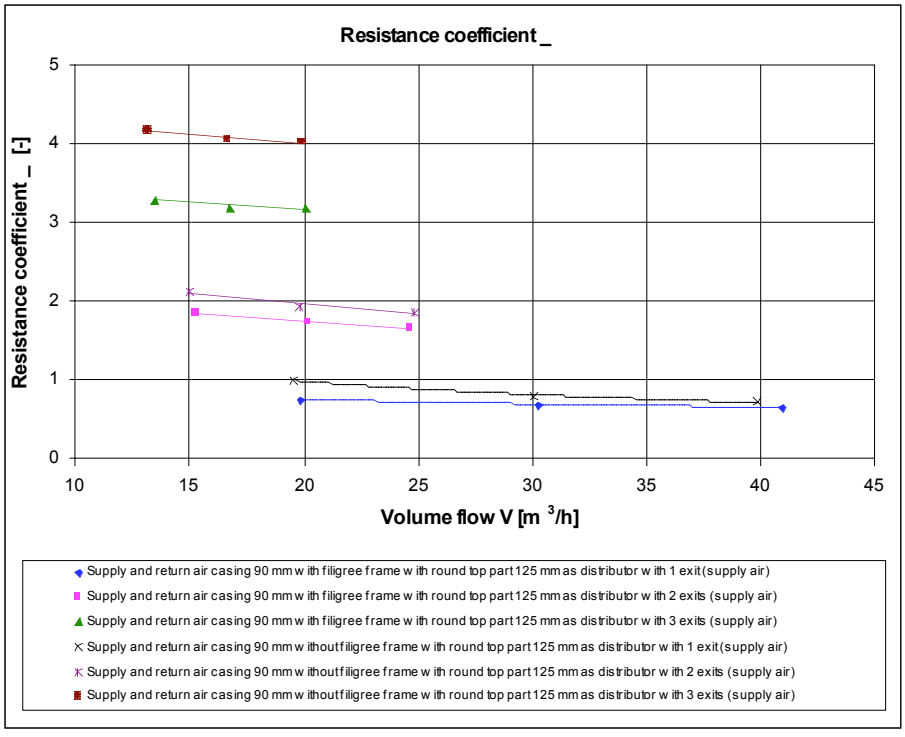




1.3. Summary supply and return air casing as distributor or collector, connecting pipe 90 mm

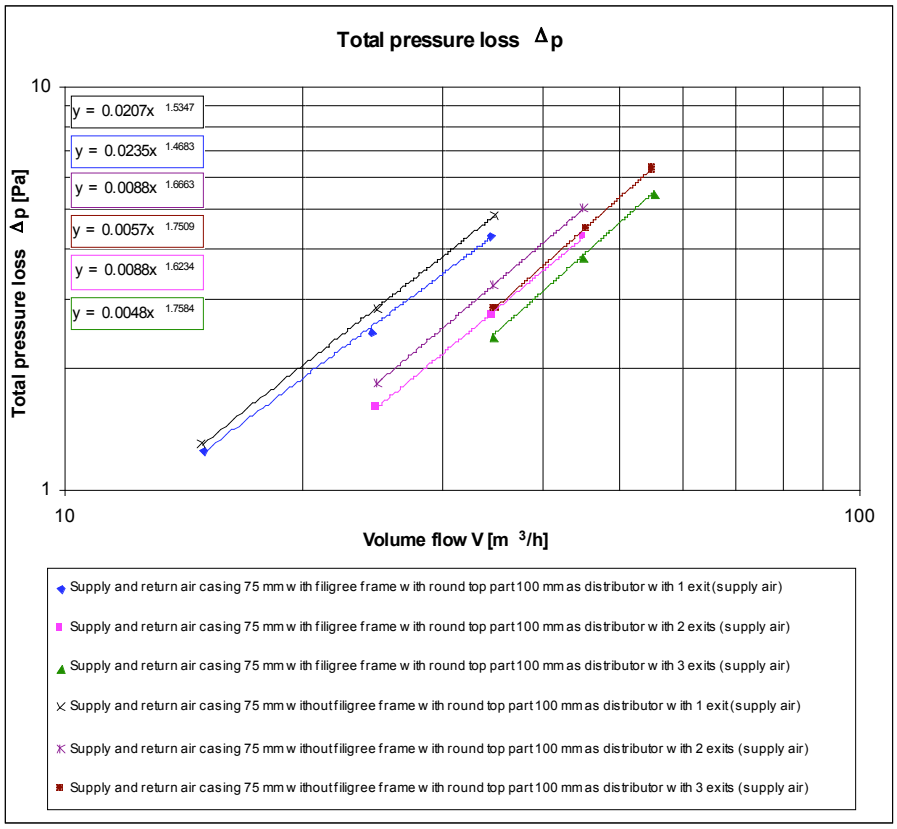
The resistance coefficient in the diagram refers to the exit speed w_2 at position 2.

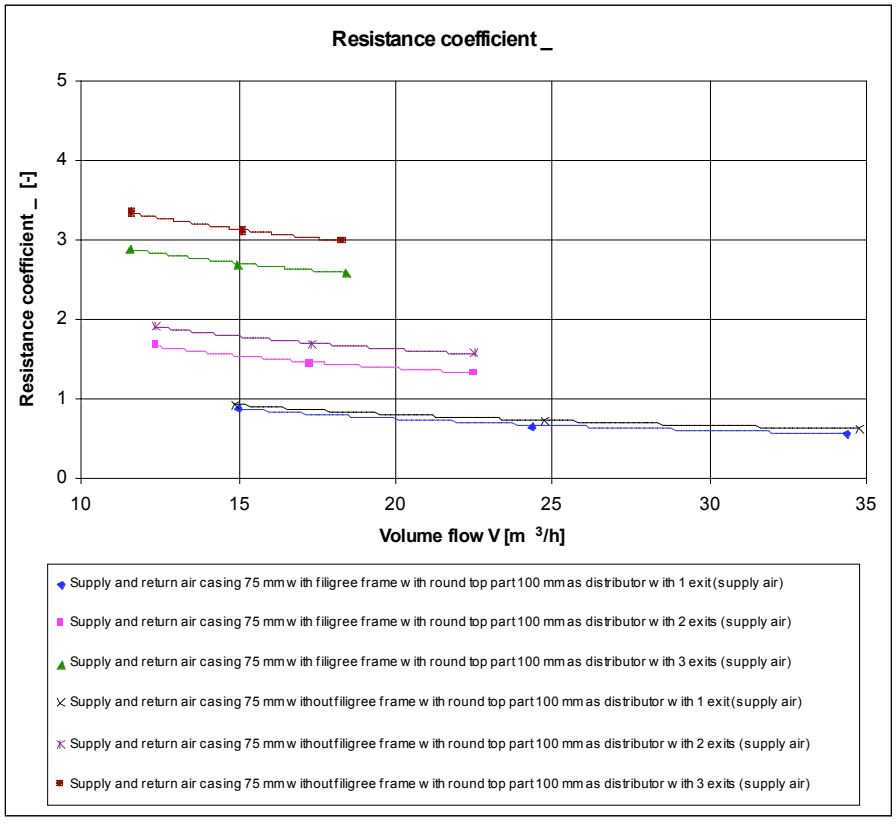




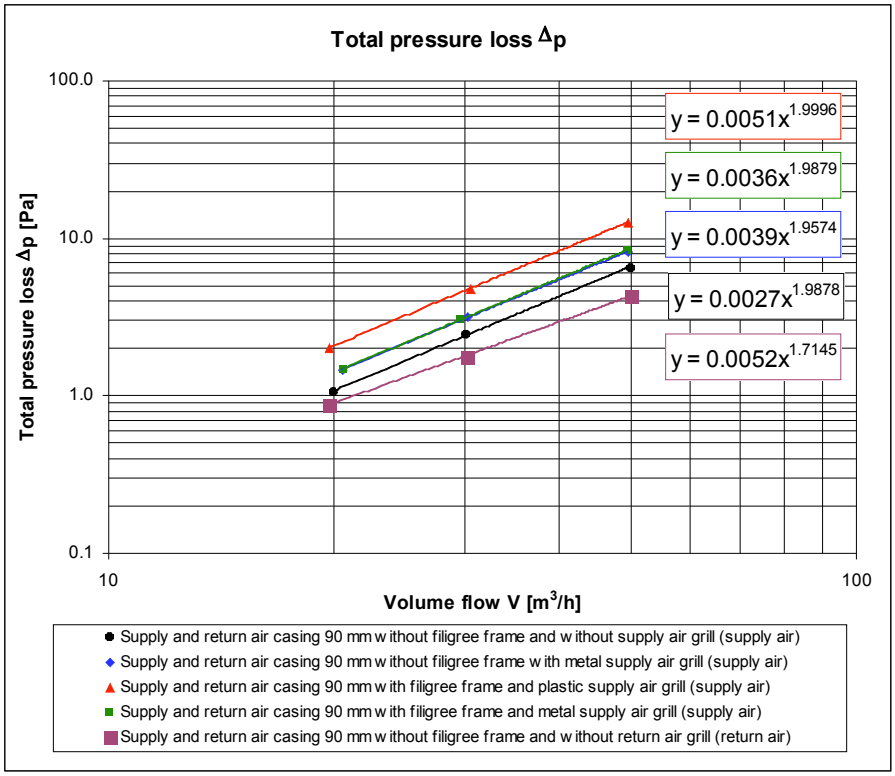
1.4. Summary supply and return air casing as distributor, connecting pipe 75 mm

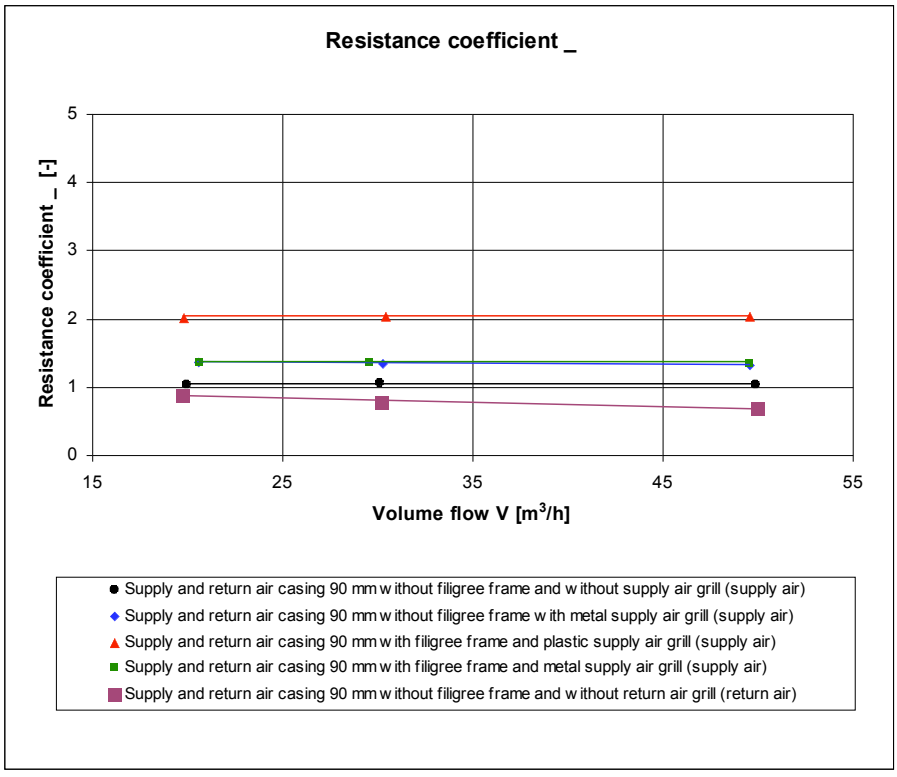
The resistance coefficient in the diagram refers to the exit speed w_2 at position 2.



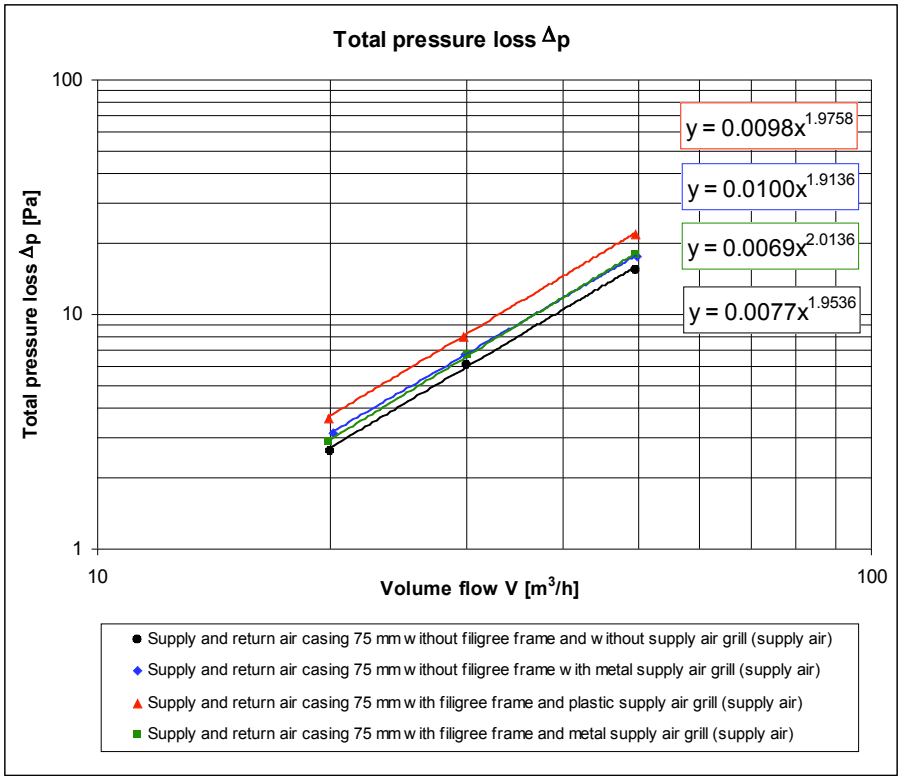


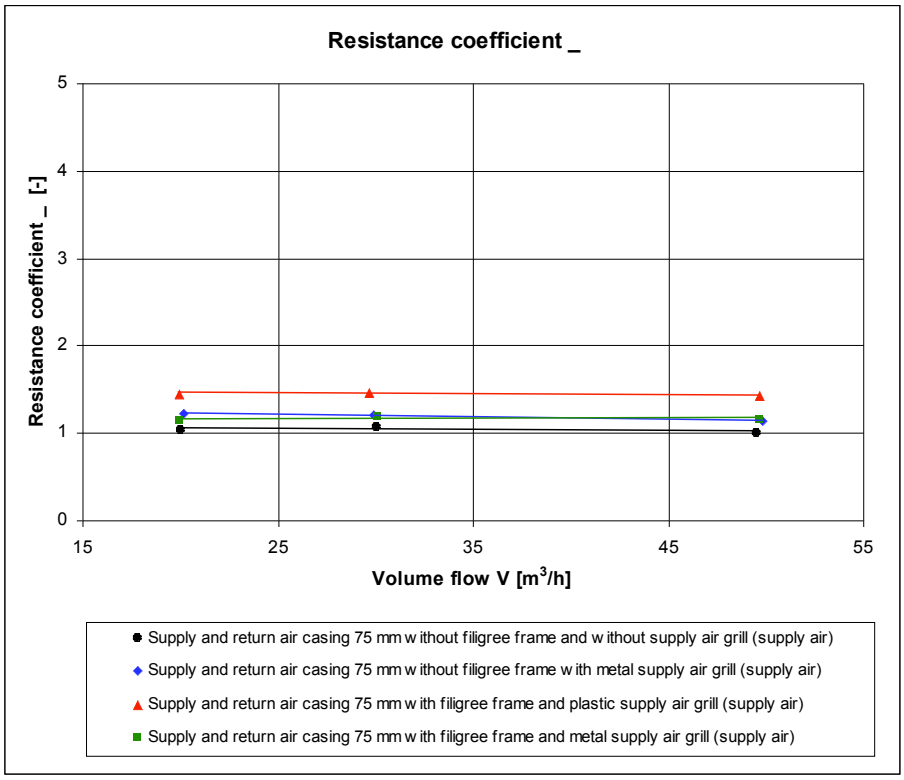
1.5. Summary supply and return air, connecting pipe 90 mm

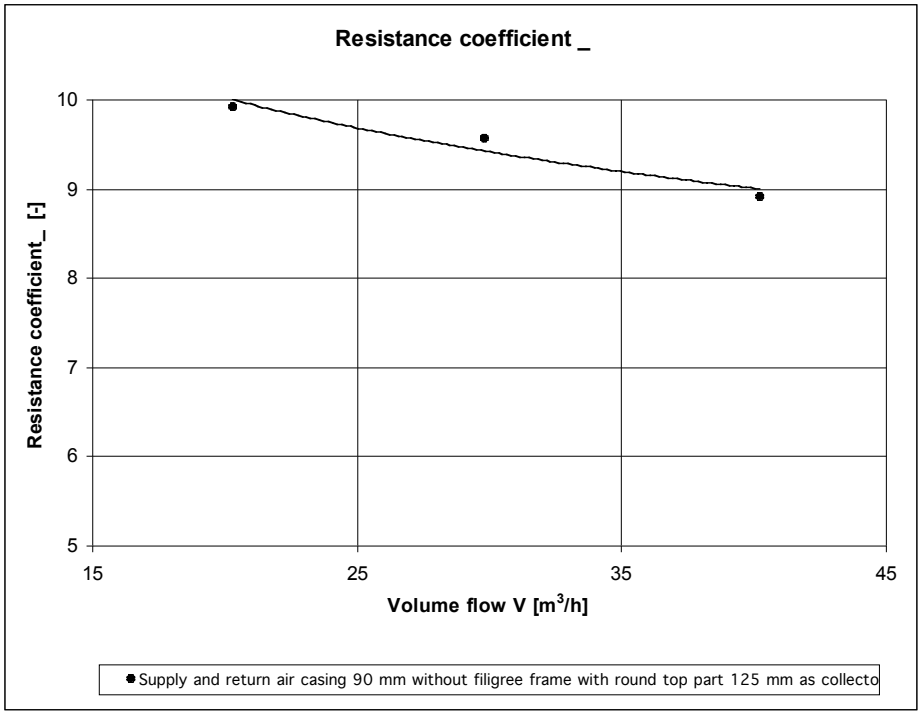




1.6. Summary supply and return air casing, connecting pipe 75 mm






Resistance coefficient _
Resistance coefficient_ [-]
10
9
8
7
6
5
15
25
35
45
Volume flow V [m³/h]
Supply and return air casing 90 mm without filigree frame with round top part 125 mm as collecto

2. Conclusion

As a precautionary action the flow distribution in the air distributors and air collectors has been looked at closely before starting the pressure loss measurements to find out if any balancing is needed. Preliminary measurements at different volume flows have shown that specifically for the pressure loss measurements of each unit under test no balancing is needed because the flow distribution in the distributors is even.

All the client's specifications outlined in the terms of reference have been met.

The measured results apply solely to the unit submitted for testing.
Electronically recorded data will be stored for the duration of 3 years. The test report and any associated documents will be archived at the ***testing laboratory HVAC*** *for the duration of 10 years.*
During this time the client may inspect these documents in situ. The costs of providing any copies that may be required will be charged to the client.

Horw, 2007-12-11

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