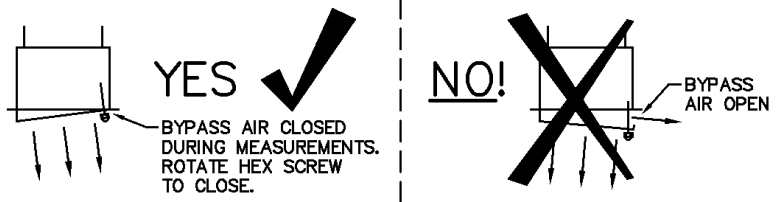


# Measuring MZ Plenum Airflows

## Procedure:

1. Ensure all Plenums are fully closed

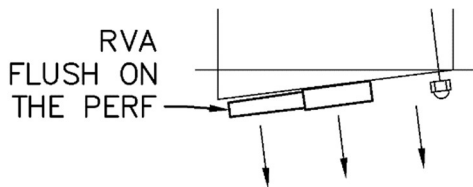


2. Perform velocity readings at **CENTRE** of each perf:

<b>48" Long: 3 Readings</b>	<b>72" Long: 5 Readings</b>																								
<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="padding: 5px;">PERF A</td> <td style="padding: 5px;">PERF B</td> <td style="padding: 5px;">PERF C</td> </tr> <tr> <td style="text-align: center; padding: 5px;">○</td> <td style="text-align: center; padding: 5px;">○</td> <td style="text-align: center; padding: 5px;">○</td> </tr> <tr> <td style="text-align: center; padding: 5px;">CENTRE</td> <td style="text-align: center; padding: 5px;">CENTRE</td> <td style="text-align: center; padding: 5px;">CENTRE</td> </tr> </table>	PERF A	PERF B	PERF C	○	○	○	CENTRE	CENTRE	CENTRE	<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="padding: 5px;">PERF A</td> <td style="padding: 5px;">PERF B</td> <td style="padding: 5px;">PERF C</td> <td style="padding: 5px;">PERF D</td> <td style="padding: 5px;">PERF E</td> </tr> <tr> <td style="text-align: center; padding: 5px;">○</td> <td style="text-align: center; padding: 5px;">○</td> <td style="text-align: center; padding: 5px;">○</td> <td style="text-align: center; padding: 5px;">○</td> <td style="text-align: center; padding: 5px;">○</td> </tr> <tr> <td style="text-align: center; padding: 5px;">CENTRE</td> <td style="text-align: center; padding: 5px;">CENTRE</td> <td style="text-align: center; padding: 5px;">CENTRE</td> <td style="text-align: center; padding: 5px;">CENTRE</td> <td style="text-align: center; padding: 5px;">CENTRE</td> </tr> </table>	PERF A	PERF B	PERF C	PERF D	PERF E	○	○	○	○	○	CENTRE	CENTRE	CENTRE	CENTRE	CENTRE
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CENTRE	CENTRE	CENTRE	CENTRE	CENTRE																					
<b>Airflow = ((PerfA + PerfB + PerfC) ÷ 3) x K</b>	<b>Airflow = ((PerfA + PerfB + PerfC + PerfD + PerfE) ÷ 5) x K</b>																								

3. Based on airflow measurement device, use appropriate Table below. Obtain velocity readings.
4. Using the K-Value, calculate the CFM for the MZ plenum.

**Table 1.**  
**Rotating Vane Anemometer (RVA) K-Values**



MZ Size	K-Value (CFM per Average FPM)	Readings per MZ
48"	1.70	3
72"	2.72	5

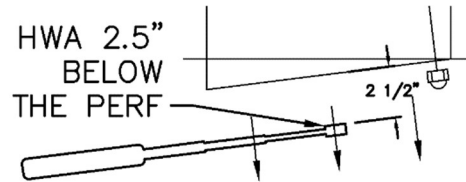
**Example: 48" Long using RVA for readings:**

- **Airflow** = ((PerfA + PerfB + PerfC) ÷ 3) x K  
Readings = 340, 440, 381 FPM
  - Average Velocity = 387 FPM
- **Airflow** = 387 FPM x 1.70 CFM/FPM = **658 CFM**

**Example: 72" Long using RVA for readings:**

- **Airflow** = ((PerfA + PerfB + PerfC + PerfD + PerfE) ÷ 5) x K
- Readings = 340, 440, 381, 480, 424 FPM
  - Average Velocity = 413 FPM
- **Airflow** = 413 FPM x 2.72 CFM/FPM = **1,123 CFM**

**Table 2.**  
**Hot Wire Anemometer (HWA) K-Values**



MZ Size	K-Value (CFM per Average FPM)	Readings per MZ
48"	2.65	3
72"	3.49	5

**Example: 48" Long using HWA for readings:**

- **Airflow** = ((PerfA + PerfB + PerfC) ÷ 3) x K  
Readings = 500, 480, 580 FPM
  - Average Velocity = 520 FPM
- **Airflow** = 520 FPM x 2.65 CFM/FPM = **1,378 CFM**

**Example: 72" Long using HWA for readings:**

- **Airflow** = ((PerfA + PerfB + PerfC + PerfD + PerfE) ÷ 5) x K
- Readings = 420, 350, 412, 533, 610 FPM
  - Average Velocity = 465 FPM
- **Airflow** = 465 FPM x 3.49 CFM/FPM = **1,623 CFM**