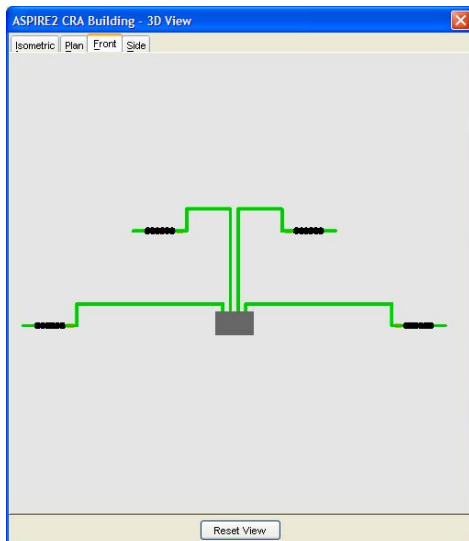




# VSW-202

## ASPIRE2™ PIPING DESIGN CALCULATOR



P/N: 19086

### Standard Features

- Ensures optimum design of air sampling smoke detection pipe networks, including branched networks
- Accurately models pipe network designs to environmental performance criteria
- Speeds the design process by automating adjustment of hole sizes
- Allows different detector performance requirements within one building
- Unique building constraints can be easily accommodated
- Custom design elements can be documented to guide the installation team
- 3D schematics to aid design and installation
- Professional reports and materials lists can be generated to add to client submissions
- Supports both metric and American measurement systems
- Compatible with other Windows® – based applications
- Set multiple detector alarm thresholds within a detector (Europe only)
- Sampling Point Sensitivity tab to confirm EN 54-20\* compliance (Europe only)

\* European Standard 54 – Fire Detection and Fire Alarm Systems – Part 20: Aspirating Smoke Detectors

### Overview

The performance of an air sampling smoke detection system is dependent upon the design of the pipe network used to transport air back to the smoke detector.

ASPIRE2 is a Windows®-based application that aids the specification and design of pipe networks for VESDA® air sampling smoke detectors. It provides the designer with tools to speed the design process and ensure optimum network performance and installation quality. ASPIRE2 also makes implementation of the design easy. With automatic generation of lists of all the components required for the project and an Installation Data Pack, the installer will have all the information they need at their fingertips.

ASPIRE2 is the latest generation of the ASPIRE application, used by VESDA system designers and installers around the world for over 15 years.

### Fast Pipe Network Design

Using the Pipe Design Wizard, you can quickly transcribe your pipe network design into ASPIRE2. Click and drag adds pipe fittings such as a pipe, elbow or sampling point as you tweak the design to suit. ASPIRE2 allows full flexibility in placement of any network components. For example, extra elbows can be introduced to direct the pipe around a ceiling beam.

Once the layout is established, you enter your performance criteria for the pipe network e.g. transport time, sensitivity etc. Using the AutoBalance function, ASPIRE2 will automatically calculate sampling hole sizes (to suit the drill bit sizes you specify). Alternatively, you can manually set the hole sizes and review the predicted system performance.

One of the great time-saving features of ASPIRE2 is the ability to save environmental design parameters for particular applications. For example, certain applications require specific transport time and sampling hole pressures or certain environments have specific conditions such as low temperatures. These parameters can be saved and used in later projects.

## Simple Handover For Installation

The Installation Data Pack (IDP) is a series of reports that list the parameters, required materials and expected system performance. Data & diagrams from the IDP can be printed or cut and pasted into other programs e.g. Microsoft® Excel® for further calculations or Microsoft® Word® for client reports.

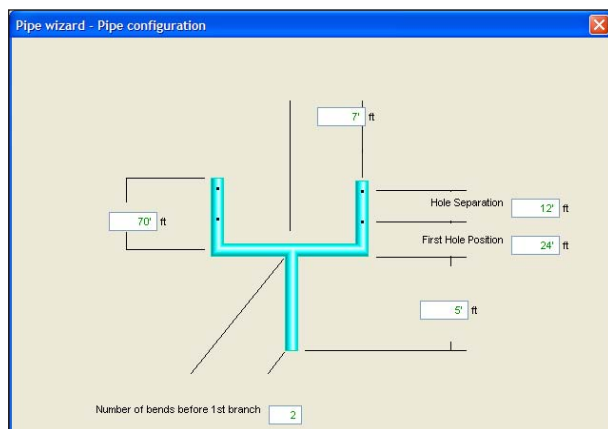
ASPIRE2 allows notes to be made on any element of the pipe design to convey design reasoning to the installer. Project-level notes can be stored with the project files. For example: an overall description of a project, project milestone dates, installation considerations or file/drawing references.

This is very useful when handing the installation over to a contractor.

## Need to vary the performance for different areas of a building?

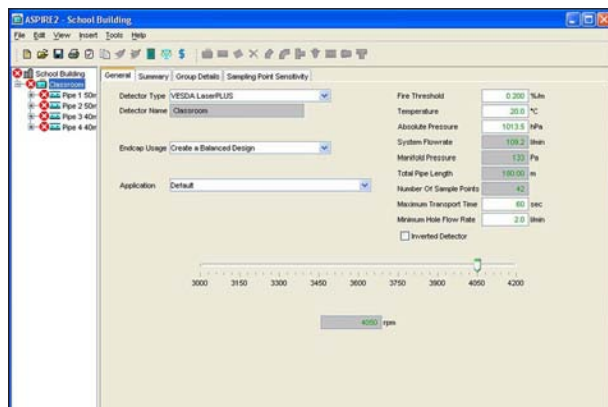
The Group function in ASPIRE2 allows you to set different performance criteria for different areas of a building. For example, your design may need to cover a computer room and a manufacturing area. The computer room requires high sensitivity due to the high airflows, while the manufacturing area may only require enhanced sensitivity to accommodate background levels associated with manufacturing processes. The latest version of ASPIRE2 also supports the new European standard EN 54-20\* by clearly reporting the Class of any particular design configuration.

## 4 Simple Steps to an Optimized Pipe Network Design



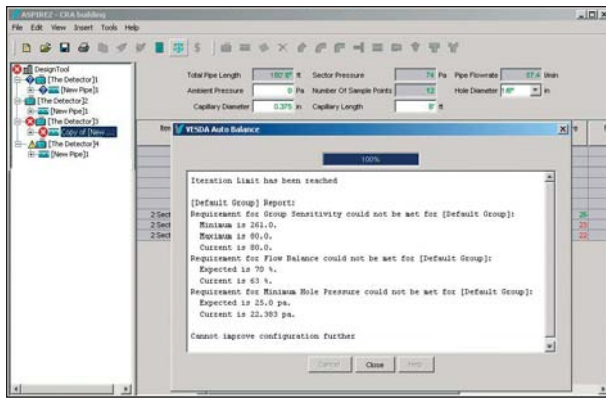
### Step 1

Use the **Pipe Design Wizard** to quickly create a pipe network that is appropriate for the building or area.



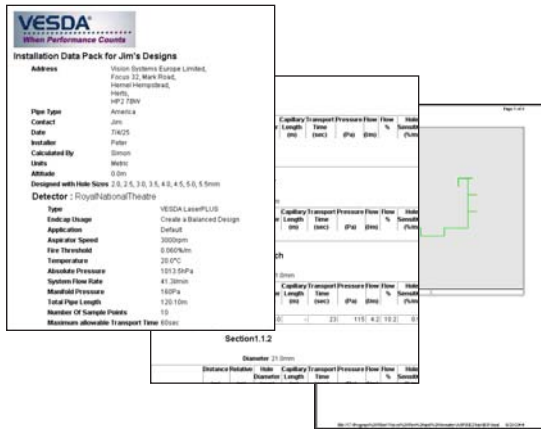
### Step 2

Enter the **performance criteria** you wish to achieve e.g. transport time, sensitivity, etc.



### Step 3

Use the **AutoBalance** function to automatically adjust the sampling hole sizes to achieve the required performance. Color-coding is used to provide feedback on the performance of the design.



### Step 4

Generate the **Bill of Materials** to assist quoting and ordering for the job. Generate the **Installation Data Pack (IDP)** to aid the correct installation of the pipe network.

## Specifications

### Computer Requirements

PC with Windows® 2000 or XP

- Sampling hole diameters: Calculated diameter for each sampling hole to ensure consistent sensitivity throughout the pipe network.
- Transport time for the pipe network: The time taken for a sample to travel from the furthest point on the pipe to the detector.

### Calculations Available

- Transport time for every hole
  - Pressure at each hole
- Flow rate at each hole (in L/min and % relative to the total flow)
  - Sensitivity at each hole (% obscuration per meter)
  - The aggregate sensitivity of a group of holes
    - EN 54-20 Class (A, B or C) - Europe only.

### VESDA Detectors Supported

- VLF-250 LaserFOCUS
- VLC-500 LaserCOMPACT
- VLS Series LaserSCANNER
- VLP Series LaserPLUS

### Parameters

- Elevation above sea level and ambient pressure can be nominated for design calculations.
- Unlimited number of detectors in a project
  - Pipe diameter and length
  - Capillary diameter and length

### Report Options

**Installation Data Pack (IDP):** This includes 3D schematics, plan and elevation drawings with all the pipe lengths, fittings and required drill bits for the installer to be able to successfully install the project.

**Bill of Materials (BOM):** This lists the components required to install the project, the detectors and pipes needed. The bill of materials includes the relevant part numbers to order from your Janus Fire Systems® representative.

**JANUS**  
FIRE SYSTEMS®



## Ordering Information

Model	P/N	Description	Ship Wt. lb (kg)
VSW-202	19086	ASPIRE2 Piping Calculator	2.0 (0.9)

*Note: Approvals/Listings maintained by and manufactured by Xtralis AG.*

The seller makes no warranties, express or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose, except as expressly stated in the seller's sales contract or sales acknowledgment form. Every attempt is made to keep our product information up-to-date and accurate. All specific applications cannot be covered, nor can all requirements be anticipated. All specifications are subject to change without notice.



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