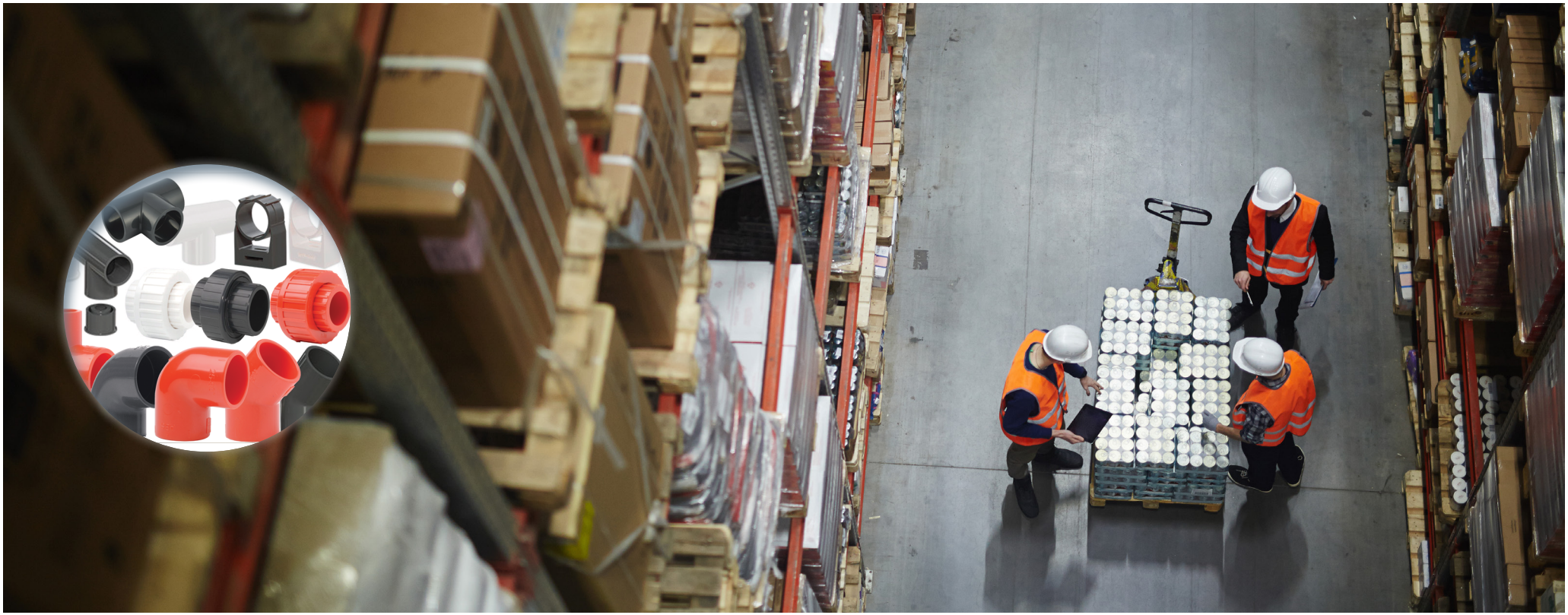
VESDA PIPES AND FITTINGS - EUROPE



INTRODUCTION

For optimal performance, an Aspirating Smoke Detection (ASD) system requires a well-designed, high-quality pipework network. At Xtralis, the manufacturer of VESDA detectors, we understood this critical need. Thus, we offer a full range of VESDA Pipes and Fittings, delivering precision-engineered solutions to our customers. Today, our reputation for excellence continues to grow, built on reliable products and satisfied clients worldwide.

QUALITY DOES NOT NECESSARILY COST MORE

We offer a comprehensive, one-stop solution for aspirating smoke detectors, pipes, fittings and accessories - streamlining your procurement process and reducing costs. Our VESDA Aspirating Pipes and Fittings are produced from Acrylonitrile Butadiene Styrene (ABS) under a stringent quality control system approved to BS EN ISO 9001, and tested and certified to EN 54-20 and EN 61386-1.

Acrylonitrile is for strength and impact resistance, **Butadiene** is for chemical resistance, and **Styrene** is for ease of manufacturing processability.

ABS is a lightweight, versatile and robust polymer that ensures easy, professional installation. Its superior physical properties - including tensile strength, chemical resistance, ductility, weatherability, heat stability and processability - make it the ideal material for ASD systems, optimizing both performance and reliability.

Beyond delivering high-quality products, we are dedicated to providing exceptional customer service. This includes fast-track ordering, fast delivery and outstanding technical support to meet your needs efficiently and reliably.

ABS SPECIFICATIONS

Physical	
Specific Gravity	1.04 Test Method ASTM D792
Melt Mass- Flow Rate (MFR)	200°C/21.6 kg 47 g/10 min 200°C/5.0kg 4.1 g/10 min 220°C/10.0 kg 34 g/10 min Test Method ASTM D1238
Molding Shrinkage - Flow	0.0040 to 0.0070 in/in Test Method ASTM D955
Mechanical	
Tensile Strength	Yield, 23°C (73°F) 50.0mm (1.97 in) 6670 psi Test Method ASTM D638
Tensile Elongation	Yield, 23°C (73°F) 50.0 mm (1.97 in), 15% Test Method ASTM D638
Flexural Modulus	Yield, 23°C (73°F) 3.00 mm (0.118 in) 312000 psi Test Method ASTM D638
Flexural Strength	Yield, 23°C (73°F) 3.00 mm (0.118 in) 9230 psi Test Method ASTM D790
Noched Izod Impact	23°C (73°F), 3.20 mm (0.126 in), 5.5 ft.lb/in 23°C (73°F), 6.40 mm (0.252 in), 4.8 ft.lb/in Test Method ASTM D256
Hardness	Rockwell Hardness (R-Scale) 108 Test Method ASTM D785
Thermal	
Deflection Temperature under Load	1.8 MPa (264 psi), Unanneald 85°C/185°F Test Method ASTM D648
Vicat Softening Temperature	95°C/203°F Test Method ASTM D1525
Flammability	
Flame Rating	1.60 mm (0.0630 in) HB 2.20 mm (0.0866 in) HB 3.20 mm (0.126 in) HB Test Method UL 94

QUALITY

Manufactured in accordance with BS5391, and approved to BS EN ISO 9001 which covers product design, manufacture and inspection.

DESIGN

The UK standards are:

- BS5839 - Fire Detection and Alarm Syslems for Buildings
- BS6266 - Code of Practice for Fire Protection for Electronic Data Processing Installations
- Fire Industry Association (FIA) Code of Practice for Category 1 Aspirating Detection Systems
- VESDA System Design Manual
- Local codes and standards may apply

1. TOUGHNESS AND DURABILITY

The Butadiene constituent of ABS enhances impact strength and toughness at temperatures ranging from -40°C to 80°C, and gives exceptional resistance to accidental damage*.

2. CHEMICAL RESISTANCE

Acrylonitrile impacts chemical resistance, thus ABS is unaffected by corrosive attack from a wide range of acids, alkaline and other aggressive chemicals.

3. EASY TO JOINT

The Styrene constituent in ABS makes it an easy material to joint using ABS solvent cement. Simple modifications to existing pipework are also possible with minimal specialist training.

4. LIGHTWEIGHT

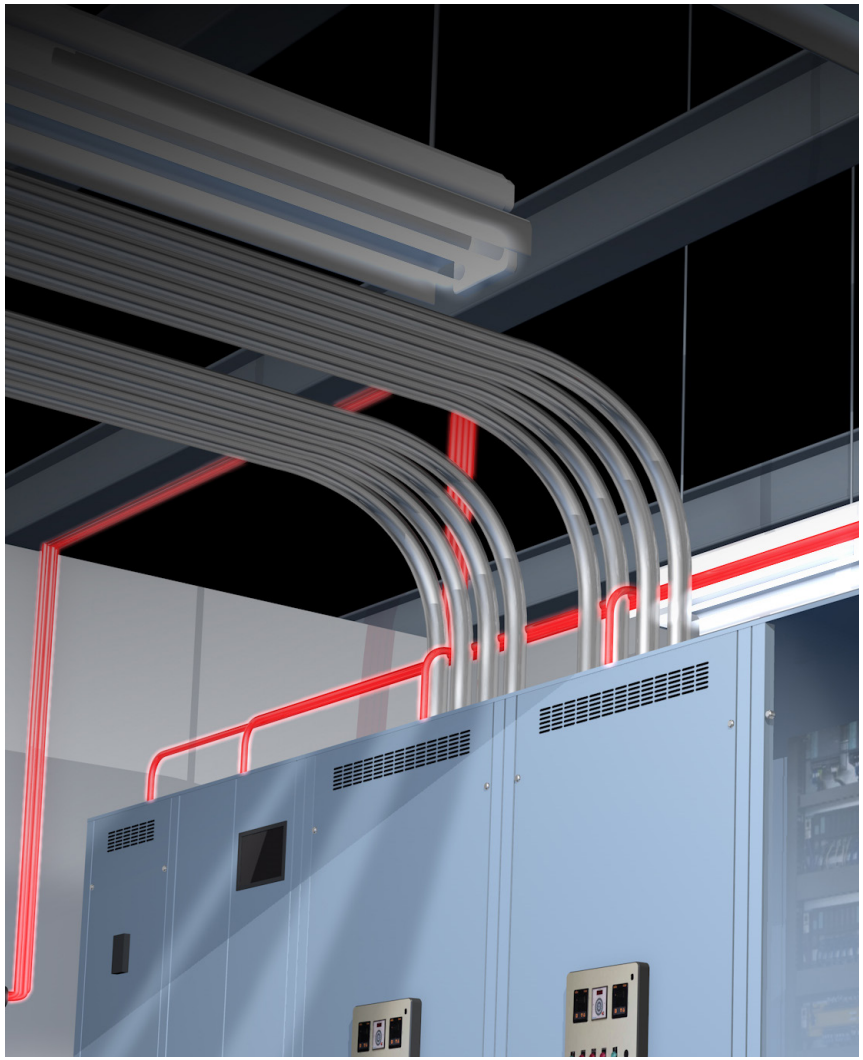
Unlike some metal pipes, VESDA ABS pipework is very light in weight. This makes it easy to handle in high and difficult locations where systems are often installed.

5. COLOUR

The standard VESDA pipes and fittings are supplied in red to identify its service as fire. They are also available in White and grey to accommodate for aesthetic reasons.

6. HALOGEN

Our ABS is not a V0 rated Polymer (Non-Fire Retardant) or classed as a low smoke or fume material which consist of < 0.00001% Halogens.



**Pipework must be installed to accommodate thermal expansion.*

XTRALIS RANGE OF VESDA PIPES AND FITTINGS – TAILORED FOR YOUR NEEDS

Our comprehensive range of Pipes and Fittings is meticulously engineered to deliver fully compatible components, ensuring the optimal performance of your entire VESDA ASD system.

Our offering features a metric standard of 25 mm outer diameter (OD) and a standard internal diameter (ID) of 21mm with suitable adapters for seamless imperial-to-metric conversions. They are designed for compatibility with all brands of low-pressure ASD systems. It also include a 2.4 meter pipe length. Tailored for wider European distribution, this length is designed to fit standard delivery vehicles, enhancing convenience for our customers. By centralizing SKUs and streamlining distribution, we ensure improved order management with short lead times and faster order processing. Additionally, the optimized pipe length reduces transportation costs, delivering significant shipping effeciencies.

Piping systems are assembled easily in the field using inexpensive tools. The one-step solvent cement joining process ensures fast reliable connections. In addition to ease of installation, this unique piping system offers enhanced flow characteristics and exceptional fire performance properties.

The complete system includes all of the components necessary to install and test the system. This includes: pipe, a comprehensive range of fittings, capillary tube, a variety of sampling point configurations and sampling point labels.

Please note that availability may vary by country. Kindly contact your local Xtralis office to confirm product availaibility before placing the order.

PIPES AND PIPE CUTTERS

The sampling pipe used for the pipe network is supplied in 2.4m lengths, and is a low cost ABS pipe with an OD ranging from 19mm to 25mm (0.75 to 1 in). We recommend using smooth bore pipes with a 21mm (0.83 inch) ID for optimal performance. However, the pipe ID may vary based on specific design requirements.

PIP-001-2.4 *

ABS Pipes 25mm, Length 2.4m (25pcs), Red

PIP-001-2.4-W

ABS Pipes 25mm, Length 2.4m (25pcs), White

PIP-001-2.4-G

ABS Pipes 25mm, Length 2.4m (25pcs), Grey

221-035

10mm OD Capillary Pipe (100m Reel), Red

221-036

10mm OD Capillary Pipe (100m Reel), Clear

PIP-014

Pipe Cutter

END CAPS

VESDA ABS End Caps are used to seal the end of pipe networks, effectively terminating airflow and ensuring the integrity of the system.
These end caps are tough, durable and chemically resistant, making them suitable for demanding environments. They are light weight and easy to join. Proper sealing with ABS solvent cement is essential to maintain system performance and reliability.

PIP-007

25mm End Cap, Pack of 10, Red

PIP-007-W

25mm End Cap, Pack of 10, White

PIP-007-G

25mm End Cap, Pack of 10, Grey

222-059

Discreet End Cap for 10mm OD Tube, Pack of 10, Clear

** The SKU in Italy is PIP-001-2.4-TF.*

BENDS AND ELBOWS

Bends and elbows are produced in ABS under a stringent quality control system, and developed to provide fully matched components for the optimal performance of the system. They are used to change the direction of the pipe; bends having a wider radius are preferred, though elbows, that are used to divert pipework around obstructions, are also acceptable. Proper sealing with ABS solvent cement is essential to maintain system performance and reliability.

PIP-005

25mm 90° Degree Slow Radius Bend, Pack of 10, Red

PIP-005-W

25mm 90° Degree Slow Radius Bend, Pack of 10, White

PIP-005-G

25mm 90° Degree Slow Radius Bend, Pack of 10, Grey

PIP-006

25mm 45° Degree Elbow, Pack of 10, Red

PIP-006-W

25mm 45° Degree Elbow, Pack of 10, White

PIP-006-G

25mm 45° Degree Elbow, Pack of 10, Grey

PIP-017

25mm 90° Degree Elbow, Pack of 10, Red

PIP-017-W

25mm 90° Degree Elbow, Pack of 10, White

PIP-017-G

25mm 90° Degree Elbow, Pack of 10, Grey

SOCKETS, SOCKET UNIONS AND EXPANSION JOINTS

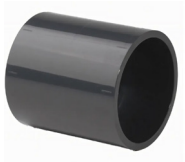
Couplings, socket unions and expansion joints are commonly used to connect pipes. **Sockets** are the standard method to connect two pipes, while **Socket Unions** are preferred in situations where pipes may need to be periodically dismantled for maintenance, they are also used when precise alignment is required, such as ensuring correct orientation of sampling holes in pipes positioned over air grilles. **Expansion Joints** are designed for use in environments where temperature variations may cause pipes to expand or contract, such as in refrigerated warehouses.

PIP-002

25mm Socket, Pack of 10, Red

PIP-002-W

25mm Socket, Pack of 10, White



PIP-002-G

25mm Socket, Pack of 10, Grey

PIP-003

25mm Socket Union, Pack of 10, Red

PIP-003-W

25mm Socket Union, Pack of 10, White

PIP-003-G

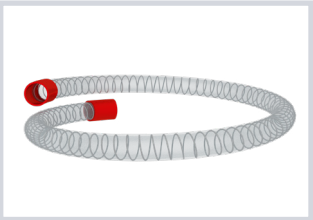
25mm Socket Union, Pack of 10, Grey

PIP-019

25mm Inline Expansion Socket 100 mm

FLEXIBLE PIPE CONNECTORS

Flexible Pipe Connectors reinforced internally with a steel wire for extra strength, are installed in situations where bends or elbows are not suitable. These connectors are ideal fittings as they can be positioned in any direction without restricting the airflow.

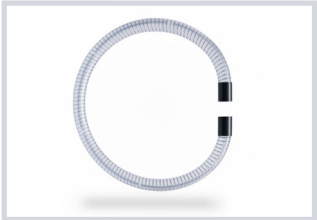


PIP-021

25mm Flexible 1m Long Connector, Red

PIP-021-W

25mm Flexible 1m Long Connector, White



PIP-021-G

25mm Flexible 1m Long Connector, Grey

PIP-026

25mm Flexible 30cm Connector, Red

PIP-026-W

25mm Flexible 30cm Connector, White

PIP-026-G

25mm Flexible 30cm Connector, Grey

LABELS

VESDA labels are provided to identify pipes and sampling holes:

- **Miniature sampling point label**: These are round labels with a hole in the center to fit around the miniature sampling points.
- **Sampling point decal**: This decal is wrapped around a pipe on the sampling hole. The decal has a hole in the center. The hole in the decal must be aligned to the sampling hole drilled into the pipe.
- **Pipe label**: This label identifies the pipe as being a smoke detector pipe and warns against tampering with it.

128-014-XTR

VESDA Sampling Point Label, 100 Pack

128-015

VESDA Pipe Labels without Hole for Sampling (100 per Roll)

E700-SP-DCL

Sampling Point Decal, Wrap Around Style (200 per Roll)

TEES, ADAPTERS AND SOCKET ADAPTERS

Tees are used for branching a sampling pipe or for attaching capillaries and drop pipes to the air sampling pipe. As for the pipe adaptors, they are used to connect imperial size pipes to the detectors pipe Inlet manifold.

PIP-008

25mm Equal Tee, Pack of 10, Red

PIP-008-W

25mm Equal Tee, Pack of 10, White

PIP-008-G

25mm Equal Tee, Pack of 10, Grey

PIP-016

25mm/10mm Capillary Tee Adapter, Pack of 10, Red

PIP-016-W

25mm/10mm Capillary Tee Adapter, Pack of 10, White

PIP-016-G

25mm/10mm Capillary Tee Adapter, Pack of 10, Grey

PIP-034

25mm/10mm Compression Adaptor, Pack of 10

PIP-035

25mm/10mm Compression Tee Adaptor (for 2 capillary tubes)

PIP-022

Air Line Tee Adaptor, Pack of 10

PIP-004 *

27mm x 25mm Socket Adaptor, Pack of 10, Red

PIP-004-W *

27mm x 25mm Socket Adaptor, Pack of 10, White

** Allow for the connection of 25mm pipe to 3/4" pipe.*

SAMPLING POINTS AND TEST POINTS

Miniature sampling points are attached to the sampling end of capillary tubes. There are two types of miniature sampling points:

- **Conical sampling points**: Local codes and standards normally specify the minimum distance from the ceiling for air sampling. The conical sampling points meet these requirements and is more commonly selected as a miniature sampling point.
- **Flush Sampling Points**: Flush sampling points are normally used when there is a need to conceal the pipe network. They may not comply with your local codes and standards. These are mostly used for performance-based systems.

As for **Test Points**, they are for periodic smoke testing of the VESDA system, particularly in hard-to-reach areas.

PIP-015

Flush Sample Point Head only (for 10mm OD tube)

144-013

Conical Sample Point Head only (for 10mm OD tube), Pack of 10

PIP-027

Air Sampling Test Point with Cap for 10mm Pipe

059-001

Flush Sampling Point Kit 2m Flexible 10mm Tube, Red

059-001-W

Flush Sampling Point Kit 2m Flexible 10mm Tube, White

059-001-G

Flush Sampling Point Kit 2m Flexible 10mm Tube, Grey

PIP-044

Flush Sampling Point Kit (c/w 2m of 10mm OD tube, T Trunk Adaptor, VSP-877 and Decal)

059-007

Conical Sampling Point Kit 2m Flexible 10mm Tube, Red

059-007-W

Conical Sampling Point Kit 2m Flexible 10mm Tube, White

059-007-G

Conical Sampling Point Kit 2m Flexible 10mm Tube, Grey

PIP-018

25mm Air Sampling Test Point, Pack of 10, Red

PIP-018-W

25mm Air Sampling Test Point, Pack of 10, White

VALVES

VESDA pipework may incorporate various types of valves, including 2-way ball valves, 3-way ball valves, large check valves, condensation valves, and non-return valves, all designed to manage airflow within VESDA smoke detection systems. They play a crucial role in ensuring the system's efficiency and reliability. They feature union ends that allow for easy removal, enabling quick refurbishment, repair, or replacement without disrupting the overall pipework. Each valve type serves a specific purpose, from directing or diverting flow (2-way and 3-way ball valves) to preventing backflow (check and non-return valves) and managing condensation buildup (condensation valves), contributing to optimal performance and system longevity.

PIP-023

2-Way 25mm Ball Valve

PIP-024

25mm Large Check Valve (Blow out Valve) Non-Return Valve, Red

PIP-024-G

25mm Large Check Valve (Blow out Valve) Non-Return Valve, Grey

801607

3-Ways Ball Valve or Manual Blow through Valve Set Complete

PIP-038

Quick Release Kit Air Line ABS 3/4", Red

PIP-038-G

Quick Release Kit Air Line ABS 3/4", Grey

PIP-025

25mm x 12" Condensation Valve Trap with Ball Valve, Red

PIP-025-G

25mm x 12" Condensation Valve Trap with Ball Valve, Grey

RSV-R25

Non-Return Valve

SAMPLING HOLE CLIPS - STANDARD VARIANTS

The ASD Sampling Hole Clip delivers reliable and accurate sampling hole sizes that are fast to install and easy to locate and identify. Each clip is colour-coded to indicate a specific hole diameter providing an instant visual guide and removing the need for closer inspection. This is particularly beneficial during commissioning and maintenance processes in applications like warehouses or large open spaces. The clips are available in two formats; Standard and Harsh Environment.

For more details, please refer to the ASD Sampling Hole Clips data sheet on Xtralis website (Doc. No. 35192).

F-PC-0

Sampling Hole Clip, Black Hole & Tab

F-PC-2

Sampling Hole Clip, 2.0mm (5/64”) Hole Size, Red Hole

F-PC-2.5

Sampling Hole Clip, 2.5mm (6/64”) Hole Size, Red Hole & Tab

F-PC-3

Sampling Hole Clip, 3.0mm (1/8”) Hole Size, Orange Hole

F-PC-3.5

Sampling Hole Clip, 3.5mm (9/64”) Hole Size, Orange Hole & Tab

F-PC-4

Sampling Hole Clip, 4.0mm (5/32”) Hole Size, Yellow Hole

F-PC-4.5

Sampling Hole Clip, 4.5mm (11/64”) Hole Size, Yellow Hole & Tab

F-PC-5

Sampling Hole Clip, 5.0mm (13/64”) Hole Size, Green Hole

F-PC-5.5

Sampling Hole Clip, 5.5mm (7/32”) Hole Size, Green Hole & Tab

F-PC-6

Sampling Hole Clip, 6.0mm (15/64”) Hole Size, Blue Hole

F-PC-6.5

Sampling Hole Clip, 6.5mm (1/4”) Hole Size, Blue Hole & Tab

Note: All parts are supplied as a pack of 5.

SAMPLING HOLE CLIPS - HARSH ENVIRONMENT VARIANTS

Harsh Environment Clip variants feature a flexi-lip design that changes its shape when subjected to compressed air. This helps any ice, fibre or dust build-up on the supporting rubber structure be easily detached and broken up by the air jetstream out of the clip hole, providing additional protection in challenging locations like freezer applications.

F-PC-HE-2

Sampling Hole Clip, 2.0mm (5/64”) Hole Size, Red Hole

F-PC-HE-2.5

Sampling Hole Clip, 2.5mm (6/64”) Hole Size, Red Hole & Tab

F-PC-HE-3

Sampling Hole Clip, 3.0mm (1/8”) Hole Size, Orange Hole

F-PC-HE-3.5

Sampling Hole Clip, 3.5mm (9/64”) Hole Size, Orange Hole & Tab

F-PC-HE-4

Sampling Hole Clip, 4.0mm (5/32”) Hole Size, Yellow Hole

F-PC-HE-4.5

Sampling Hole Clip, 4.5mm (11/64”) Hole Size, Yellow Hole & Tab

F-PC-HE-5

Sampling Hole Clip, 5.0mm (13/64”) Hole Size, Green Hole

F-PC-HE-5.5

Sampling Hole Clip, 5.5mm (7/32”) Hole Size, Green Hole & Tab

F-PC-HE-6

Sampling Hole Clip, 6.0mm (15/64”) Hole Size, Blue Hole

F-PC-HE-6.5

Sampling Hole Clip, 6.5mm (1/4”) Hole Size, Blue Hole & Tab

Note: All parts are supplied as a pack of 5.

MOUNTING FIXTURES

The sampling pipe is mounted using appropriate pipe mounting options, such as pipe clips, nuts, rod and plug adaptors, ties, etc.
VESDA Pipe Clips are specifically designed to secure air sampling pipe with a quick clamp mechanism, eliminating the need for additional fixings. These clips are suitable for both indoor and outdoor applications, offering excellent resistance to UV exposure, oil and petrol.

PIP-009

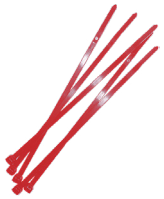
25mm Pipe Clip, Pack of 20, Red

PIP-009-W

25mm Pipe Clip, Pack of 20, White

PIP-009-G

25mm Pipe Clip, Pack of 20, Grey



PIP-013

Pipe Ties 203mm x 4.6mm, 100 Units, Red

OTHERS

PIP-020

Aspirating 25mm Intumesent 2hr Fire Collar

PIP-033

25mm Sight Glass with Condensation Drain, Red

PIP-033-W

25mm Sight Glass with Condensation Drain, White

02-WT-01

25mm Self Draining Water Trap, Red

02-WT-01-G

25mm Self Draining Water Trap, Grey

251-001

Smoke Test Wire, 100m

251-003

Smoke Pellets, 8 Tablets

251-002

Smoke Test Matches, 12 Pack

VSP-810

Smoke Pen with 6 Wicks

VSP-811

Smoke Pen Refill Pack of 6 Wicks

ABS SOLVENT CEMENT

PIP-012

250 ml Solvent Cement Welding

PRODUCT INFORMATION

ABS Solvent cement is used to bond pipes. It may also be used to bond pipe accessories such as couplings, socket unions, bends, elbows, tees and end caps to the pipe.

- Container size: 250mls,125ml
- Toxicity: Not regarded as dangerous for the environment

PRECAUTIONS AND HANDLING

- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
- Wash hands after handling. When using do not eat, drink or smoke.
- Store in tightly-closed, original container.
- Use only outdoors or in a well-ventilated area.
- Wear protective clothing, gloves, eye and face protection.
- Avoid inhalation of vapours and spray/mists. Avoid spilling. Avoid contact with
- skin and eyes.
- Get medical advice/attention if you feel unwell.
- Keep out of reach of children.
- Turn leaking containers leak-side up to prevent escape of liquid. Mark contaminated areas with signs and prevent access to unauthorised personnel.
- Do not discharge into drains or watercourses or onto the ground. Contain the spillage using bunding.
- Waste disposal: Dispose of contents/container in accordance with national regulations.

The integrity of aspirating pipe systems may be affected if VESDA ABS solvent cement is not used. Xtralis disclaims responsibility for any aspirating pipe system constructed with other cements.

WARNING

- Flammable liquid and vapour.
- Causes serious eye irritation.
- May cause drowsiness or dizziness.
- Contains EPOXY RESIN (Number average MW <= 700). May produce an allergic reaction.

ABS SOLVENT CEMENT SPECIFICATIONS

Physical and Chemical Data	
Appearance	Colourless to pale yellow, Viscous liquid, Ketonic Odour
Flash Point	-21C°
Flammability Limits	Lower flammable/explosive limit: 1.2% Upper flammable/explosive limit: 11.8%
Relative Density	0.92 @ °C
Solubility(ies)	Immiscible with water
Auto-Ignition Temperature	212°C
Viscosity	12500 mPa s @ 20°C
Fire and Explosion Hazard Data	
Extinguishants	Water spray, dry powder or carbon dioxide.
Specific Hazards	Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m3. Extremely flammable.
Hazardous Combustion Products	Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.
Stability and Reactivity Data	
Reactivity	Stable under recommended transport or storage conditions
Chemical Stability	Stable at normal ambient temperatures.
Possibility of Hazardous Reactions	No known hazardous reactions if stored under normal conditions. Will not polymerise.
Conditions to Avoid	Heat
Incompatible Materials	Strong oxidising agents. Strong acids.
Hazardous Decomposition Products	Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

Symptoms and Effects of Exposure	
General Information	Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.
Skin Contact	There may be irritation and redness at the site of contact.
Eye Contact	Irritating to eyes. Symptoms following over-exposure may include redness or pain.
Inhalation	There may be a feeling of tighness in the chest with shortness of breath. Exposure may cause coughing or wheezing.
Ingestion	There may be soreness and redness of the mouth and throat. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.
First Aid Measures	
General Information	Remove affected person from source of contamination.
Skin Contact	Wipe off from skin with paper or towel. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.
Eye Contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes.
Inhalation	Move affected person to fresh air at once. Get medical attention.
Ingestion	Immediatcly rinse mouth thoroughly with water. Do not induce vomiting. Seek medical attention promptly.

STORAGE AND FIXING

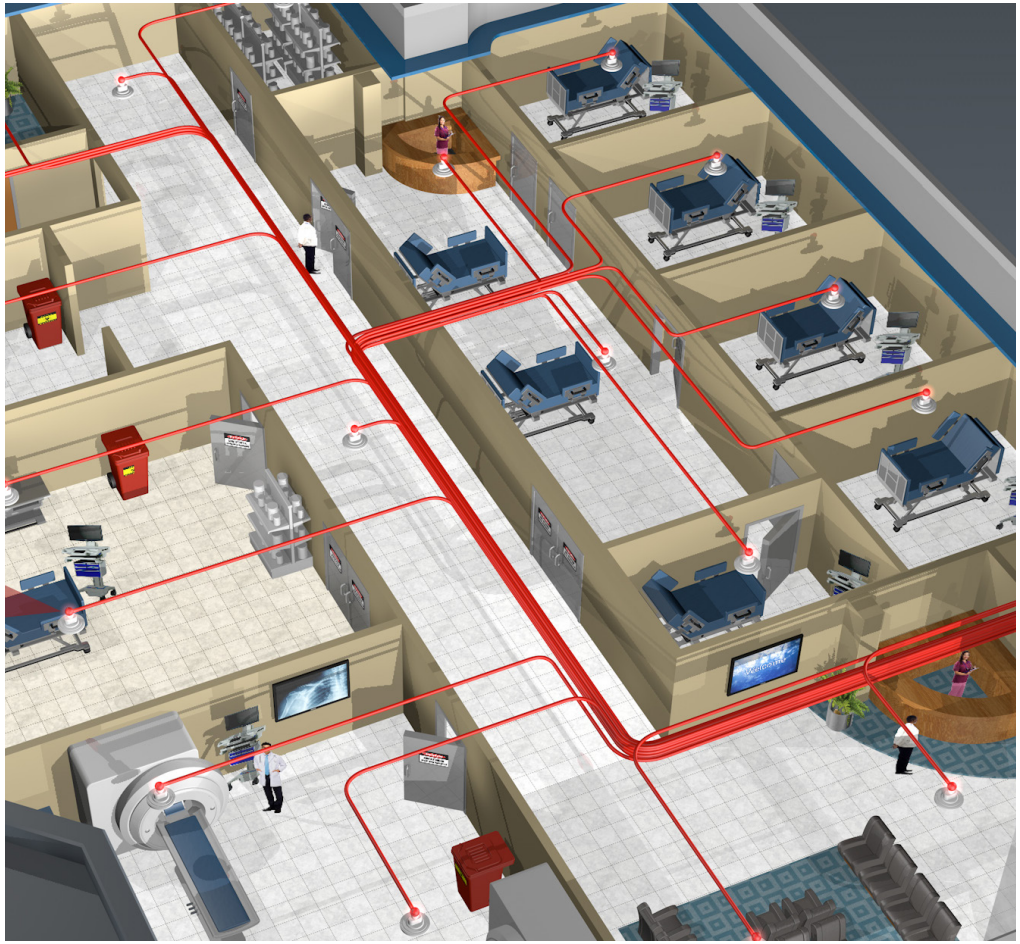
HANDLING AND STORAGE

The high impact strength of ABS systems provides some protection against damage but care should be taken at all stages of handling, transportation and storage.

- Pipe must be transported by a suitable vehicle and properly loaded and unloaded.
- The storage should be flat, level and free from sharp stones.
- Pipes should not be stacked exceeding a maximum height of 500mm as this can lead to pipe distortion.) Smaller pipes may be nested inside larger pipes.
- Stacks should be protected from the effects of weathering (particularly ultra violet exposure which can lead to some loss in the impact properties of ABS) by placing an opaque covering over them.
- Side bracing should be provided to prevent stack collapse.
- Similar precautions should be taken with fittings, and these should be kept in protective wrappings until required for use.

FIXING AND SUPPORT

- Main sampling pipes 25mm OD; 21mm ID.
- Sampling holes of 2mm diameter, or otherwise appropriately sized to achieve the performance as specified and calculated by the system design.
- Sampling points shall not be at more than 10 metres intervals BS5839.
- Sampling points shall not be at more than 5 metres intervals BS6266.
- Each Sampling Point shall be identified.
- Minimum OD of the Capillary tube shall be 10mm.
- Maximum length of the Capillary tube shall be 8 metres.
- The Capillary tube shall terminate at an approved ceiling sampling point.
- Air Sampling Pipe Network Calculations shall be provided from ASPIRE.



JOINTING

JOINTING

- Solvent cement welding is a simple and quick means of constructing high integrity leak-free joints. Correctly made joints are stronger than either pipe or fittings.
- Joint integrity is greatly reduced if surfaces are not absolutely clean and properly prepared.
- The number of joints likely to be made is approximately 400 per litre of VESDA ABS cement.
- Drying time for joints will vary with fit, amount of solvent cement applied, ambient
- temperature and working pressure.
- It is recommended that wherever possible, joints are left to cure for 24 hours.

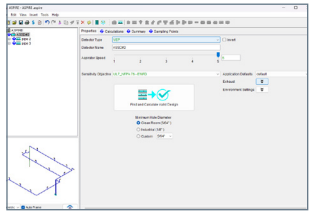
The following jointing procedure MUST be followed:

1. Cut the pipe cleanly and squarely using a proprietary cutter.
2. Remove all burrs and clean out swarf. File a chamfer, approximately 3mm x 45°. (Prevents cement being scraped from the fitting when the joint is assembled.)
3. Using clean, coarse emery cloth, thoroughly abrade the end of the pipe over a length equivalent to the depth of the fitting socket.
4. Thoroughly abrade the socket of the fitting.
5. Clean all abraded surfaces using a clean, lint-free cloth or paper towel, moistened with MEK cleaner.
6. Remove lid from solvent and stir thoroughly.
7. Using the brush supplied, apply cement to the abraded areas of the pipe and fitting using longitudinal strokes. These should be completely covered. The amount required will vary with fit but should be such in all cases that the cement is still liquid (to allow surfaces to slide) when pipe and fittings are assembled. It is important to apply cement quickly, to enable assembly without excessive force.
8. Immediately after applying cement, push pipe fully home into the fitting. Do not twist. Hold the pipe and the fitting for a few seconds. The slight taper moulded into the fitting may otherwise cause it to slide with consequent loss of joint strength.
    a. Application of the correct amount of cement will result in a neat bead of cement at the edge of the fitting and at the edge of the pipe. Excessive deposits inside the fittings must be avoided as these can weaken the wall.
    b. In cold conditions make sure the joints are free from frost and moisture and allow extra curing time.
9. Wipe off excess cement from the outside of the joint.

DESIGNING PIPEWORK HAS NEVER BEEN EASIER

The performance of an ASD system is dependent on the design of the pipe network used to transport air samples from protected zones to highly sensitive detectors. To support this, we have develped **ASPIRE** Pipe Network Design Software - an advanced, Windows-based software specifically designed for creating and modeling pipe system layouts for VESDA, VESDA-E and FAAST FLEX.

Trusted by system designers and installers worldwide for over 20 years, ASPIRE is the go-to tool for ensuring reliable, high performance ASD systems. It helps system designers and installers optimize their networks by estimating critical performance factors, including:



- **Smoke transport time**
- **Airflow Balance among sampling pipes and holes**
- **Influence of varying end cap vent sizes**
- **Effect of various fittings**
- **Classification to EN54-20** (Classes A, B or C)

COMPREHENSIVE SUPPORT FOR DESIGNERS AND INSTALLERS

- **Training and Accreditation:** Attend our regular VESDA Accreditation Training Courses to become confident ASPIRE user.
- **Application Design Guides:** Detailed guides to help you avoid common design and installation issues, ensuring optimal system performance.
- **Dedicated Customer Service:**
  - Expert technical advice from experienced field engineers.
  - Assisstance with design, installation, commissioning and performance testing.

To learn more about the considerations and limitations of the use of additional low-risk optional components in the ASD pipe network arrangements, please refer to the below documents on Xtralis website:

- 17785 - Xtralis In-Line Filter Application Note (VSP-805 Inline Filter)
- 18336 - Xtralis Open-Flow In-Line Components Application Note

ABOUT XTRALIS

Xtralis is a leading global provider of powerful solutions for very early & reliable detection of smoke, fire, and gas threats. Our technologies prevent disasters by giving users time to respond before life, critical infrastructure or business continuity is compromised.

We protect highly valuable and irreplaceable assets and infrastructure belonging to the world's top governments and businesses.

To learn more, please visit us at www.xtralis.com