Solutions
To Air Pollution Control

Corrosion Resistant Air Emissions Equipment

Plasticair
From the Engineers and Craftsmen at Plasticair...

Plasticair is a tightly integrated developer and manufacturer of specialized emission control solutions. Since we were established in 1980, we’ve committed ourselves to offering a unique combination of engineering excellence and manufacturing craftsmanship to help our clients solve the most demanding environmental challenges.

Technical Excellence...
The key to our success is the quality of our products. It begins with the expertise of our mechanical and chemical engineering staff whose patented designs give us the edge in the marketplace. It continues with our selection of state-of-the-art materials and our strategic relationships with the research chemists. But there is more to environmental engineering than state-of-the-art chemistry and precision mechanics; keeping up with regulatory changes can be a full-time job. Our engineers and managers are routinely exposed to local, national and global regulations - we keep current. We are always ready to help you engineer an optimal, future-proof, cost-effective solution. That is why a partnership with Plasticair is unbeatable.

Minds and hands...
Within our manufacturing facility our commitment to quality is evident in everything we build, from the skilled hands of our staff, their fabrication experience, methodical assembly skills and dedication to excellence, to our tight, comprehensive process controls and quality audits. This quality is evident in the reliability and economy of thousands of units we have deployed all over the world. At Plasticair our unique combination of engineering vision, modern manufacturing techniques and old-fashioned craftsmanship is at your service.

Working Together...
We believe in hands on engineering. Our design and manufacturing teams work closely not just to deliver the best in quality design, but also to do it fast. We can offer custom design services, short lead-time and rush deliveries, consulting and support services to address all your environmental management solutions from concept to implementation.
INTRODUCTION TO SCRUBBER TECHNOLOGY

In recent years, greater environmental awareness has meant increasing regulatory requirements on industry for environmental control and pollution abatement to meet occupational health standards within the plant as well as meeting community and national air quality standards in the plant vicinity.

But there’s more to environmental control than regulatory compliance - the right engineering decisions today can mean increased flexibility in choosing a greenfield site, a future-proof process that anticipates tomorrow’s environmental regulations as well as optimized process costs and maximized profits. That’s why we at Plasticair advocate a total solution approach, partnering with our customers throughout the design and implementation cycle. We can deliver a range of pollution control solutions that offer:

- **the capacity** to meet the most challenging regulatory requirement
- **the performance** to meet the toughest operating environments
- **efficiency and reliability** to minimize your operating overheads
- **the flexibility** to handle future growth in plant capacity
- **innovative design and construction** to provide corrosion resistance and longevity
- **at a price point** designed to minimize your total acquisition costs

Additionally, as part of our total solution approach, Plasticair’s engineers can provide consultancy services for situation analyses, system customization, commissioning and start-up support.

Wet scrubber technology offers the most powerful, cost-effective range of solutions to industrial airborne pollution challenges. At Plasticair we’re uniquely qualified to help you design and implement emission control solutions. We’ve been designing, manufacturing and deploying this technology worldwide since 1980. Our experienced staff is ready to supply fully automated scrubber systems complete with fans, fully programmed PLC control panels and chemical dosing systems offering contaminant removal efficiencies of up to 99.9% on particles as small as one micron.

This bulletin explains how scrubber technology works and introduces Plasticair’s complete line of scrubber technology solutions.

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**The Plasticair Scrubber Selection Guide**

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<thead>
<tr>
<th>Scrubber Series</th>
<th>Acid Gas</th>
<th>Fine Acid or Alkaline Mist</th>
<th>Medium Acid or Alkaline Mist</th>
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<th>Medium to Heavy Oil, Mist and Dust Particles</th>
<th>SUMMARY</th>
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<td>MIST ELIMINATOR SUITABLE FOR ANY REMOVAL OF 72 MICRON PARTICLES OR LARGER.</td>
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Mass Transfer

Mass transfer is the chemical process by which scrubber units absorb contaminated gas molecules, sub-micron mists and particulates into a scrubbing liquid. This fundamental process is independent of the scrubber unit’s configuration or orientation.

At its simplest, mass transfer involves a contaminated air stream moving through a mixing chamber. A liquid sprayed into this chamber mixes with the air stream. Contaminated gas molecules are dissolved by contacting with the sprayed liquid and are removed from the air stream. The process relies on the natural affinity, or attraction, of the contaminant molecules to the scrubbing solvent which may be plant water or involve the addition of chemical solvents to improve the absorption of certain chemical contaminants.

The efficiency of the mass transfer process is enhanced by introducing packing media into the mixing chamber to create turbulence within the air stream, forcing the molecules of the scrubbing liquid and the contaminants into intimate contact. Efficiency may be further enhanced by ionizing the air stream.

Scrubbing technology, using the mass transfer process, is the most cost effective pollution control solution for sub-micron gaseous contaminants at velocities below 2.5 m/sec (500 fpm) particularly where the contaminant concentration is low.

Impingement

Impingement refers to the simple mechanical process of forcing molecular collisions between scrubbing liquids, particulates or mists. These collisions may be either between molecules and fixed media or among the molecules themselves. Typically the fixed media are packing, mesh, profile blades or rods.

Impingement is most effective when used with air stream velocities greater than 7.5 m/sec (1500 fpm).

Coalescing

This is a cost effective mechanical process for removing mists or entrained liquid by forcing small liquid drops to coalesce or combine to become larger drops. This is accomplished by introducing a coalescing pad into the air stream as part of a vertical or horizontal system implementation. Upon exiting the coalescer unit, the coalesced liquid is removed from the contaminated air stream by means of a mist eliminator. This process is effective at high gas velocities, typically of 5.08 m/sec (1000 fpm) or higher.
MIST ELIMINATORS

Plasticair’s P series vane module mist eliminator is an impingement separator unit consisting of an FRP shell, FRP transitions, CPVC sprays for periodical wash-down, a drain and two removable PVC Vane Bank modules. Detail on Next Page

Vane Banks

Plasticair’s proprietary Vane Bank Module is fabricated by us using our patented PVC extruded vane blade design. The vane blades are assembled into a removable frame unit for easy inspection and maintenance. Vane bank units incorporate a standard spacing of 16 mm (0.625") between blades and can be operated vertically or horizontally. These vane banks may be incorporated with various Plasticair scrubber units as part of a comprehensive elimination solution or may be used in a stand-alone mode as an effective particle and mist removal unit.

Plasticair high efficiency vane bank units are capable of achieving removal rates of up to 99% of particulate contaminants of 12 microns or larger. They operate at an effective velocity range of 1.5 M/sec (300 fpm) to 10.16 M/sec (2000 fpm).

Mesh-Type Mist Eliminators

Plasticair’s mesh mist eliminators are high efficiency collection units ideally suited for small liquid particle collection. Mesh mist eliminators are suitable for air stream velocities of less than 3.048 M/sec (600 fpm). Mesh-type units should be used for mist elimination solutions with low exposure to particulates to avoid clogging.

High Density Packing

High density packing has between 2 and 3 times more surface area per volumetric unit than standard packing media and may be used as a mist eliminator for air stream velocities of approximately 2.4 M/sec (480 fpm). High density packing results in a much higher pressure drop per unit of packed bed length because of the increased surface area.

Plasticair’s standard mist eliminator using high density packing incorporates a 305-914 mm (12-36") bed length. This type of mist eliminator achieves a standard efficiency of 99% removal for particles of 10 microns or larger.
A packing medium is usually introduced into the mixing chamber to increase both impingement and mass transfer processes within a scrubber unit. Referred to as scrubber bed packing, this material is designed for maximum surface area, with minimal air stream impedance and, consequently, the least possible pressure drop within the mixing chamber. This packing material maximizes the wetted-surface contact between the contaminated air stream and the applied scrubber liquid. By minimizing the pressure drop within the chamber, the packing material minimizes power requirements, energy consumption and operating costs. Polypropylene is typically used as a packing medium although certain applications may require PVC, PVDF, ceramic or polyethylene based scrubber beds.
Crossflow Packed Bed Scrubbers are used in environmental control applications which require contaminant gas absorption with or without particle removal. The process involves a scrubbing liquid flowing vertically through the scrubber mixing chamber perpendicular to the contaminated air stream. The mixing chamber contains packing material which maximizes contact between the two streams, facilitating contaminant absorption of the scrubbing liquid before falling into the sump below.

Plasticair’s HCS/HS Series Crossflow Scrubbers are used for gaseous and particulate contaminant removal as well as for odour control applications. Plasticair scrubbers incorporate a unique WAVEWALL™ construction which offers greater structural integrity of the scrubber unit than traditional straight wall construction. More importantly, this construction enhances operating efficiency by forcing packing material into the patented wall crevices, maximizing contact and reducing negative wall effects. This increased efficiency is particularly evident when dealing with low volume airflows.

For applications involving complex contaminants in a noxious gas stream, Plasticair offers crossflow scrubber configurations with multiple packing bed sections, each designed to capture a particular contaminant. The chemical dosing process of each bed is isolated by incorporating a separate mist eliminator and sump within each section.

Plasticair also offers crossflow scrubber configurations incorporating an ionizing section, manufactured from 316 stainless steel, to more effectively eliminate sub-micron and non-polar particulates by charging arriving contaminant molecules before they enter the packed bed sections. The charged particles are attracted to the wetted packing media, greatly increasing absorption and removal.
Counter current packed bed scrubbers involve a downward flowing liquid, either plant water or chemical solvent, impinging upon an upward flowing contaminated air stream. Contaminants are absorbed by the scrubbing liquid which collects in the sump. This type of scrubber is used to achieve gas absorption, with or without particle removal, using the principle of mass transfer. Once again, packing material is used to maximize the wetted surface contact between the opposing streams.

As with crossflow scrubbers, Plasticair can customize the number of beds or modify the bed length to meet the contaminant or efficiency objectives of any application. Note that unlike crossflow scrubber implementations, a multiple bed counter current scrubber requires a separate vessel for each bed section to avoid any carry over between sections. High density random packing, often in conjunction with mesh pads may be configured to further prevent mist carry over. PVC vane-type mist eliminators are most commonly used in Plasticair counter current applications.

Comparing Cross Flow and Counter Current Scrubber Applications

Maintenance:
Because the liquid and gas streams in crossflow scrubber applications do not directly impinge upon each other, this design is less susceptible to clogging.

Cost:
Crossflow scrubbers use less liquid than comparable counter current scrubbers thus requiring less pump capacity. The pressure drop in vertical counter current scrubbers is slightly higher than in cross flow scrubbers because of the opposing gas and liquid streams. Consequently, cross flow scrubber energy consumption costs are lower than for comparable counter current models.

Space Constraints:
Horizontal scrubbers are ideal for height-restricted installations where height is limited. The height and width of Plasticair’s HCS/HS series scrubbers can be customized to accommodate most scrubber service rooms. Counter current scrubbers are ideal for applications where floor space is limited and height is unrestricted.
We continue to see increasingly stringent regulations to abate industrial odours in many sectors from agricultural facilities to industrial users of chemical processes to municipal waste treatment facilities.

Plasticair offers a wide range of vertical and horizontal odour scrubbers designed to meet a wide range of performance objectives, process chemistries, operating budgets and physical constraints.

In addition, Plasticair’s engineers can provide consultancy services for situation analyses and evaluations, customized system design, commissioning and start-up support.

**Horizontal Odour Scrubbers - The Plasticair HCS Series**

The Plasticair HCS series of crossflow scrubbers are designed to provide high efficiency odour control in environments where height is a major constraint. The HCS design allows both the height and the width of the unit to be customized to accommodate restrictive scrubber mechanical rooms. The HCS series can support air volumes from 236 l/sec (500 cfm) up to 47,200 l/sec (100,000 cfm) and can achieve gas absorption efficiencies of up to 99.9%.

Plasticair’s HCS series exemplifies the Company’s commitment to leading-edge design and state-of-the-art materials selection. Each unit is built with a solid Fibre Reinforced Plastic (FRP) scrubber shell for maximum corrosion resistance, structural integrity and longevity which is further enhanced by Plasticair’s unique WAVEWALL™ design for improved efficiency and structural integrity. Internal components utilize a combination of Polypropylene, PVC, CPVC and Fiberglass. Multiple units may be configured in series to further improve efficiency and to support several scrubbing liquids for complex odour control situations.

**Vertical Odour Scrubbers - The Plasticair VCS Series**

The Plasticair VCS series of counter current scrubbers provide ideal odour control in locations with limited floor space but without height restrictions. The VCS series can support air volumes ranging from 236 l/sec (500 cfm) up to 35,400 l/sec (75,000 cfm) while achieving gas absorption efficiencies of up to 99.9%.

Like their HCS series counterparts, Plasticair’s VCS series units are built with a solid Fibre Reinforced Plastic (FRP) scrubber shell and internal components of Polypropylene, PVC, CPVC and Fiberglass Reinforced Plastic (FRP).

In standard configuration, HCS/VCS series units are supplied with a 2438 mm (8’ 0”) packed bed for maximum absorption efficiency. These units can be configured with optional integral pumps, PLC Control Panels and secondary containment systems. In addition, Plasticair can provide custom HCS/VCS series configurations based on the individual process application or gas absorption efficiency objectives. Custom configurations may involve changes to any of the following HCS/VCS series design parameters:

- packed bed length
- water volume
- chemical dosing volume
- dosing system chemicals selection
- air velocity
- use of ionization section(s)
- use of flushing section(s)
- choice of premium quality vinyl ester or polyester resins for scrubber shell
- choice of alternative thermoplastics and resins for internal components

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### HCS-SERIES

General dimensions only. Intermediate sizes are not listed in this bulletin.

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In addition to traditional applications such as plating, metal processing and battery manufacturing, the industrial use of acid-based etching processes have increased significantly in recent years particularly in the electronics sector. Etching and plating process design requires stringent management of acidic emissions for clean air and workplace safety regulatory compliance. In addition, tight control of airborne acidic contaminants can prevent plant and process equipment from premature deterioration through corrosion.

For over fifteen years, a broad spectrum of industrial sectors have relied upon Plasticair to meet their acidic emission control needs. To address wide ranging process applications as well as a diversity of global emission control standards, Plasticair has developed a series of four highly efficient acid scrubber models which can flexibly and economically meet the toughest emission management challenges. These scrubber units may be custom configured to offer a range of elimination efficiencies from 60% using spray chambers and mist eliminators to 99.9% using packed beds.

**Horizontal Acid Scrubbers**

Plasticair’s HS series of horizontal acid scrubbers incorporates a high efficiency crossflow design ideally suited for elimination of both acidic and alkaline mists. These designs can be configured to eliminate corrosive particulates generally by incorporating a spray unit at the front face of the packed bed. This provides a flushing action which reduces clogging and maintenance overhead. Please refer to the introduction to scrubbing technology at the beginning of the document for a more detailed explanation of crossflow scrubber operating principles.

The HS series may be configured to support gas volumes ranging from 236 l/sec (500 CFM) up to 47,200 l/sec (100,000 CFM) with efficiencies of up to 99.9%.

**Vertical Acid Scrubbers**

The Plasticair VS series of vertical acid scrubbers use the counter current process, as described in the introduction to scrubbing technology at the beginning of this document, to provide high efficiency elimination of corrosive mists and particulates, both acidic and alkaline. This range of scrubber units can be configured to handle a range of gas volumes from 236 l/sec (500 CFM) up to 35400 l/sec (75,000 CFM) at up to 99.9% contaminant elimination efficiency.

In standard configuration, the HS and VS series of acid scrubbers incorporate a 1524 mm (60") packed bed. The optimum bed length is application specific and Plasticair’s designers can extend or reduce the standard dimensions to accommodate specific contaminants or removal efficiency objectives.
GENERAL DIMENSIONS ONLY. INTERMEDIATE SIZES ARE NOT LISTED IN THIS BULLETIN.

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**UNIT OF MEASUREMENT:** KG, LBS, INCHES, MM, CFM, CMS

### VS-SERIES

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**GAS VOLUME:** CFM, CMS

GENERAL DIMENSIONS ONLY. INTERMEDIATE SIZES ARE NOT LISTED IN THIS BULLETIN.
The following examples illustrate the versatility of standard designs in addressing a wide range of process challenges. The first case study involves a Nitric Acid elimination scenario.

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<th>Removal Efficiency Objective</th>
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<td>Contaminant</td>
<td>HNO₃</td>
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<td>Solution</td>
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<td>Length of packed bed</td>
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<td>Bed material</td>
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<td>Chemical dosing</td>
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<td>pH Level</td>
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<tr>
<td>Air velocity (through packing)</td>
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The scrubbing liquid is dosed with the neutralizing agent (NaOH, Sodium Hydroxide) in the scrubber unit’s recirculation system. The recirculated liquid is sprayed into the packed bed, absorbing the oncoming nitric acid mist and neutralizing the corrosive emission. Because of the unusually high efficiency objective in this case, Plasticair’s engineers solved the problem by extending the bed length to provide a sufficient neutralization interval.

In a more complex case study, an acid scrubber is used for removal of an NOₓ contaminant stream containing HNO₃ (Nitric Acid), NO (Nitric Oxide) and NO₂ (Nitrogen Dioxide). For cost effectiveness, a counter current scrubber is ideally suited to this application and Plasticair’s approach to NOₓ removal normally involves a three stage counter current packed bed implementation. The first stage converts NO to NO₂ through oxidation. The second stage reduces the concentration of HNO₃ and NO₂. Finally, the third stage is used for odour removal. This system typically will have an air stream velocity of 1.5 m/sec (300 fpm) and achieve a 99% removal efficiency.
The E series of scrubber units from Plasticair offers an extremely cost effective, low maintenance set of mist elimination solutions. These units are used in a variety of corrosive control applications, most commonly in the metal finishing industry. In plating applications, E series scrubbers may be used for chrome particulates down to 1 micron in size. The most common configurations incorporate a combination of internal sprays and mist eliminators in conjunction with a coalescer unit. Packed beds are not normally included in these designs.

Stringent design and materials selection contribute to the efficiency and cost effectiveness of Plasticair’s multi-stage mist eliminators. E series units are built upon a solid FRP scrubber shell and employ CPVC sprays and piping. Mist elimination sections, operating on the principle of mechanical impingement, use a PVC vane stage incorporating Plasticair’s patented, high-efficiency vane design. The coalescer stage utilizes a polypropylene coalescer pad. The E series offers significant configuration flexibility and Plasticair can offer custom designs and material selections for a wide range of applications.

E Series configurations support gas volumes of between 94.4 l/sec (200 cfm) and 28320 l/sec (60000 cfm). In gaseous contaminant applications, 80% removal efficiency may be achieved with velocities of 2.286 m/sec (450 ft/min). For solid contaminants, 99% removal efficiency of 3 micron, or larger, particulates is achievable using air stream velocities up to 10.16 m/sec (2000 ft/min.).

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GENERAL DIMENSIONS ONLY. INTERMEDIATE SIZES ARE NOT LISTED IN THIS BULLETIN.
The Plasticair ECE series of venturi scrubbers are ideal for fine particle collection. These horizontal non-clogging units operate on the impingement principle and are capable of collecting 99% of particles 1 micron or larger. ECE Series units operate at air flow velocities ranging from as low as 94.4 l/sec (200 cfm) to 33040 l/sec (70,000 cfm) at up to 2484 Pa (10.0” W.G.) pressure drop. Custom designed vertical units are also available.

In addition to the ECE series, Plasticair also offers an economical series of mini-venturi scrubbers suitable for very low volume applications.

Venturi Scrubber Operation

A contaminated air stream entering the scrubber inlet is immediately drawn into the venturi section, where molecular impingement occurs. A scrubbing liquid sprayed directly into the venturi section impinges upon the gaseous contaminant. This scrubbing liquid usually contains a chemical dosing agent to neutralize and dissolve contaminant particles. The air stream is accelerated significantly within the venturi section with velocities ranging from between 20.3’ m/sec (4000 ft/min) to as much as 45.72 m/sec (9000 ft/min) depending on the removal efficiency objectives.

ECE series units can provide low maintenance particulate elimination solutions to meet the toughest challenges. Plasticair’s venturi scrubber design incorporates knock-down baffles, located directly behind the venturi section, which significantly eliminates liquid entrainment from the air stream. This prevents over-loading in the unit’s mist elimination section by reducing vane bank clogging.

Stringent materials selection is critical to the quality and robustness of ECE series venturi scrubbers. All units incorporate, as standard, a solid FRP scrubber and venturi shell, internal components constructed from FRP, PVC or CPVC and standard recirculation pumps constructed from CPVC.

Plasticair can supply customized ECE series-based solutions including fully programmed PLC control panels ready for standalone automation or ready for integration with existing process designs. Customized designs for piping and chemical dosing systems, integral sumps and pumps, vane bank wash-down units and optional solid fiberglass industrial exhaust fans are a Plasticair specialty. In addition to custom solution engineering and fabrication, we also offer system start-up support and commissioning services as part of our commitment to offering total environment control solutions.
STANDARD FEATURES AND OPTIONS

1. Adjustable Venturi Section
2. Chemical Sampling Housing
3. PH/ORP Control Panel
4. Liquid Recirculation System
5. Mist Elimination Section
6. Clean Air Outlet (Round or Rectangular)
7. Dirty Air Inlet (Round or Rectangular)
8. Mixing Chamber
9. Chemical Injection Piping
Plasticair’s FHS series of fumehood scrubbers, ideal for elimination of acidic emissions, offers a unique solution to laboratory emission management. The patented design of the FHS series offers major advantages over traditional solutions including:

- reduced installation cost
- reduced maintenance cost
- longer operating life
- high quality industrial design in a compact integrated unit

while meeting the most stringent air emission standards.

The FHS series integrates a counter current scrubber with a traditional fumehood design to reduce space requirements, eliminate the need for a remote scrubber and significantly reduce installation and maintenance costs. The standard FHS series unit is capable of removing 96% of acidic contaminants up to 500 PPM. These units, originally designed for perchloric acid elimination, are effective in controlling the complete spectrum of industrial inorganic acids including Hydrochloric, Hydrofluoric, Sulphuric and Nitric acids and Aqua Regia.

This compact unit incorporates a scrubber unit located at the back of the fiberglass hood while the scrubber recirculation pump and tank are located in the cabinet area directly below the fumehood workspace. As a result, an integrated fumehood scrubber can be accommodated in the same space as a traditional fumehood.

By providing an integrated fumehood and scrubber design, Plasticair’s FHS series unit offers a far simpler and less expensive installation than traditional fumehood and remote scrubber combinations. Maintenance costs are reduced by the improved accessibility of the scrubber components.

The FHS series has been designed for performance, robustness and longevity. It uses premium quality polyester in the FRP inner casing and bypass louvers to provide the greatest resistance to acidic corrosion while offering greater structural integrity and a wider operating temperature range than traditional thermoplastics.

The FHS series offers more than a powerful emission control solution. It’s crisp exterior design and choice of custom colour options, the attention to detail and careful fabrication by Plasticair craftsmen as well as the rigorous visual and functional quality audit each unit undergoes before leaving our facility means easy integration with existing laboratory fixtures and furnishings.
Fumehood Scrubber Optional Equipment

- **pH Control**: Plasticair can supply a complete chemical dosing system for FHS series units to allow automatic pH control.

- **Hood Wash-down Unit**: This unit allows the work chamber to be washed-down from outside the fumehood.

- **Fan Control**: The FHS series can incorporate a remote variable frequency control unit to allow easy air flow adjustment at the hood.

- **Work surfaces**: A variety of work surface materials are available from Plasticair.

- **Custom Electrical Outlets**: We can provide customized receptacle location to satisfy any client requirements.

- **Airflow Monitor**: This option provides air flow indication and may be set to trigger an alarm should the air flow drop below safe levels.

---

**FHS-SERIES**

**STANDARD SIZES**

- 2388mm, 1803 mm, 1499mm, 1194mm

**VENT DUCT**

**HOOD WASHDOWN**

**BAFFLE**

**SIDE PANELS TO SERVICES**

**PUMP SWITCH**

**SEPARATE BASE UNIT**

**FUME SCRUBBER**

---

**FUMEHOOD SCRUBBER**

---

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**UNIT OF MEASUREMENT**

- **Volume**: l/sec
- **Pressure Drop**: Pa
- **Length**: inches W.C., mm, inches
Programmable Logic Control

PLC Control Panels are critical to the successful implementation and integration of any automated emission control system. Plasticair offers standard and customized control panel configurations as well as custom programming for each system we deliver. We stock a wide range of branded PLC hardware to accommodate specific functional requirements, price objectives or vendor-preference constraints. In addition, we can provide commissioning and start-up electrical services.

Plasticair can design PLC solutions which incorporate control and monitoring of pumps, fans and chemical dosing systems. Our designs can accommodate either scrubber-mounted control instrumentation or via remote mounted panels. We only use UL/CSA approved control panel components.

Options

- Choice of Enclosure Rating
- Fiber Glass Enclosures
- Motor starters
- Selector Switches
- Pilot Lights
- Beacon Lights
- Alarms
- Annunciators
- Sump Heaters
- Variable Frequency Drives
- LCD Display Monitors
- Remote Terminal Panels
- Thermostats
- Flow Sensors
- Level Sensors
- Pressure Sensors
- Auto Pump Sequencing
- Auto Fan Sequencing
- Interface Contacts
Chemical Dosing Systems

Scrubbing solutions routinely incorporate a chemical dosing system. Plasticair’s chemical engineering staff have the expertise and experience to design and supply appropriate chemical dosing systems for the most complex elimination scenarios.

Again stringent raw materials and OEM component selection ensures quality, robustness and longevity. Our dosing systems use FRP, PVC or polyethylene chemical holding tanks, top quality metering pumps, and precision pH and ORP analyzers.

Options

- Custom Backlit LCD Display
- High and Low Set points
- Limit Timers for Each Output
- 4-20 mA recorder Output (option)
- Proportional Pulse or Relay Output

- pH Programmable Response Delay
- Single and Dual Point Calibration
- 0-14 pH Scale
- +2000 mV Scale
- ORP Programmable Response Delay

Display Options

- Current mA Output
- Current Pump Speed
- Timer Settings and Readings
- Alarm Conditions

- Current pH Value
- Temperature
- Current mV Value
Plasticair manufactures a wide range of centrifugal and axial exhaust fans in FRP and polypropylene. Note that scrubber applications typically use a centrifugal fan.

**Plasticair BCMPA Series Centrifugal Exhaust Fans**

Plasticair’s BCMPA series of centrifugal exhaust fans are typically used for low and medium pressure applications. These units support air stream volume ranges from 94.4 l/sec (200 cfm) to 47,200 l/sec (100,000 cfm) at pressures of up to 3477 Pa (14” W.G.). BCMPA series units use a Class 1 or Class 2 impeller incorporating a heavy duty, industrial-rated airfoil design of FRP construction. BCMPA series units are built with a heavy duty FRP housing and use 316 stainless steel fasteners throughout.

**Plasticair HP Series Centrifugal Exhaust Fans**

Plasticair’s HP series of centrifugal exhaust fans are typically used for medium and high pressure applications. These units support air stream volume ranges from 47.2 l/sec (100 cfm) to 18,880 l/sec (40,000 cfm) at pressures ranging from 2,484 Pa (10” W.G.) up to 14,902 Pa (60” W.G.). HP series units use a Class 3 or Class 4 impeller incorporating an extra heavy duty, industrial-rated radial FRP construction. HP series units incorporate an extra-heavy duty FRP housing and use 316 stainless steel fasteners throughout.

**Plasticair 800 Series Inline Centrifugal Exhaust Fans**

Plasticair’s 800 series of inline centrifugal exhaust fans are typically for low to medium pressure applications. These units support air stream volume ranges from 236 l/sec (500 cfm) to 18,880 l/sec (40,000 cfm) at pressures up to 2,484 Pa (10” W.G.). 800 series units use a Class 1 or Class 2 impeller incorporating a heavy duty, industrial-rated airfoil design of FRP construction. 800 series units are built upon a heavy duty FRP housing and use 316 stainless steel fasteners throughout.

**Plasticair Clamshell Series Centrifugal Exhaust Fans**

Plasticair’s Clamshell centrifugal exhaust fans offer a unique center-line discharge configuration and are ideal for low volume, low pressure applications such as laboratory exhausts. These units support air stream volume ranges from 47.2 l/sec (100 cfm) up to 944 l/sec (2000 cfm) at pressures of up to 993 Pa (4.0” W.G.). Clamshell series units use a polypropylene or FRP Class 1 backward inclined impeller. The fan housing is of polypropylene or FRP and uses a combination of 304 and 316 stainless steel fasteners.
FRP Fans
Plasticair Product List

Scrubbers:
- Horizontal Packed Bed - Single/Double (HS-Series)
- Vertical Packed Bed Towers (VS-Series)
- Odour Control Scrubbers (HCS, VCS-Series)
- Demisters - Vane Type (P-Series)
- Demisters - Mesh Type (M-Series)
- Demisters - Multiple Stage Type (E-Series)
- Venturi Scrubbers (ECE-Series)
- Laboratory Fume Hood Scrubbers (FHS-Series)

Scrubber Applications:
- Oil/Air Separators
- Chlorine Scrubbers
- Micro Chip Manufacturing Scrubbers
- Plating Plant Scrubbers
- Pickling Line Scrubbers
- Chromic Acid Scrubbers And Demisters

FRP Fans:
- Axial Fans - Vane/Tube/Roof/Panel (900/700-Series)
- Inline Centrifugal Fans (800-Series)
- Bifurcated Fans - Centrifugal/Axial (BIF-Series)
- Clamshell - Light Duty Centrifugal Fans (C-Series)
- Centrifugal - Low Pressure Fans (LP-Series)
- Centrifugal - Medium Pressure Fans (MP-Series)
- Centrifugal - High Pressure Fans (HP-Series)

Plasticair Inc., Servicing Industry

Plasticair’s Sales Forces are located in major cities around the world.

Contact the factory for the agent closest to you.

Plasticair’s Sales Forces are located in major
cities around the world.

Your Local Plasticair Representative is:

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