KCH — YOUR CLEAR CHOICE

Let us help you get in the clear and provide the systems and services you need, whatever direction your company is taking.
Story of KCH --- It’s All About Quality.

KCH Services was founded in 1979 in Rutherfordton, North Carolina, by a select group of experienced plastic fabricators and technicians. The Company’s dedication to quality, service and innovation is paramount to its current position as the country’s leading designer and manufacturer of corrosion resistant ventilation and scrubber systems.

KCH Services currently manufactures a complete line of ventilation equipment in PVC, CPVC Polypropylene and Fiberglass. KCH’s product line includes fans, ductwork, hoods, vertical and horizontal flow scrubbers, mist eliminators and automated control panels. KCH also designs and installs turnkey finishing lines. In the end, our key product is Quality, Engineering, Know How and Service.

KCH’s commitment to being the leader in corrosion resistant ventilation and pollution control system has allowed for the development of the Spectra U Mist Eliminator. The Spectra U Mist Eliminator has proven to be the most efficient system available for the reduction of hexavalent chrome from the exhaust created during the chrome plating process. In addition KCH introduced Transport+™, a very versatile hoist system for a variety of plating line applications.

The same know how and dedication used in the development of KCH’s most complicated systems is available to address even your simplest requirements. That’s the KCH quality and service benchmark – helping the customer solve problems.

Engineered Systems
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PVC, CPVC, Poly-Pro and FRP Ventilation Systems;
Complete Automated Metal Finishing Systems,
Fume Scrubbers,
Mist Eliminators, Centrifugal Fans, Tanks, Lab Fans,
Exhaust Hoods, Duct & Fittings

LOWEST PRICES — DUCT, HOODS & ACCESSORIES
TANKLINES

The staff at KCH Engineered Systems has had many years of experience designing systems to meet the needs of customers in the metal finishing industry. A full range of hoist systems including overhead, sidearm, center lift, rail style, and gantry style is offered. In addition, KCH offers classic elevator conveyor (return type) machines for high volume fixed cycle production. All KCH equipment is designed with KCH fans and scrubbers as part of the package, a distinct advantage over equipment designers who go to a separate source for air handling equipment. All design drawings are done on the latest version AutoCAD and become part of the customers documentation package delivered with the machine.

KCH has full electrical control console design and fabrication capabilities, featuring UL (Underwriters Laboratories) approval.

KCH assigns a project manager to be your contact throughout the duration of your project. The project manager will handle all details and concerns throughout the project, from the first engineering review meeting until the final acceptance and training.

Full installation services are offered to make your project turnkey. KCH will provide rigging, piping, wiring, and full start-up services for its equipment.

TANKS

KCH custom designs tanks for your application. The appropriate materials of construction are PVC, CPVC, polypropylene, polyethylene, steel, stainless steel, or fiberglass. Koroseal lined steel is also offered. Appropriate girth bands are supplied to minimize tank wall deflation. Plastic tanks have a combination of fusion and butt welded panels, and are hydro-tested at our plant to ensure leak free operation. Metal tanks are welded both inside and outside to ensure strength and reliability of operation.
Fume Scrubbers
PHASER & PHASER III SERIES
VERTICAL FLOW FUME SCRUBBERS

PHASER & PHASER III packed tower fume scrubbers demonstrate one of the first designs in fume scrubbers. This efficient unit allows the use of a stack fan or a centrifugal design fan. If restricted floor space is the problem, the PHASER is the solution.

OMNI & OMNI III SERIES
VERTICAL FLOW FUME SCRUBBERS

OMNI fan scrubber combination is the true economizer in both space and price. The OMNI is available in both single pack and extended pack units. The outlet can be rotated 360 degrees during installation before being bolted in a fixed position. This unit offers excellent efficiency up to 12,000 CFM.

REMOTE RECIRCULATION AND pH CONTROL SYSTEMS

An optional remote recirculation system is available for sub-zero climates. Also available are such options as pH control systems and automated units for precise system control. KCH has qualified personnel for the design and fabrication of detailed control panels and metering systems.

from 500 to 60,000 c.f.m. to meet ALL your POLLUTION CONTROL requirements
Fume Scrubbers

HEDRON SERIES
HORIZONTAL FLOW FUME SCRUBBERS

HEDRON SERIES III
HORIZONTAL FLOW FUME SCRUBBERS
OMNI SERIES
VERTICAL FLOW FUME SCRUBBERS

OMNI SERIES III
VERTICAL FLOW FUME SCRUBBERS

NOTE: * ALL SCRUBBERS SHOWN ARE SELF-CONTAINED UNITS. ALL UNITS ARE ALSO OFFERED WITH REMOTE RECIRCULATION SYSTEMS, SEE SHEET 13.
Fume Scrubbers

PHASER SERIES
VERTICAL FLOW FUME SCRUBBERS

PHASER III SERIES
VERTICAL FLOW FUME SCRUBBERS

NOTE: * ALL SCRUBBERS SHOWN ARE SELF-CONTAINED UNITS. ALL UNITS ARE ALSO OFFERED WITH REMOTE RECIRCULATION SYSTEMS, SEE SHEET 13.
SPECIFICATIONS and PERFORMANCE DATA

All KCH Fume Scrubbers are constructed of corrosion resistant PVC, polypropylene, FRP or stainless steel. Each unit is shipped complete with an integral coated base. No special mounting is required. Simply connect the duct, water and power supply and the unit is ready for operation. Installation and operating instructions are supplied with all scrubbers.

All KCH Fume Scrubbers may be supplied with water either directly from your supply or from an integral or a remote recirculation system supplied with your scrubber. It is generally recommended that a recirculation system be used to conserve water except on very low cfm units. The actual fresh water consumption on the single pack series with recirculation is only 0.05 to 0.15 gpm/1000 cfm. This represents approximately 5% of the water being recirculated. KCH Fume Scrubbers are self contained, however, when installed outdoors where sub-zero conditions could occur, to prevent freeze-up, a remote recirculation system should be specified for placement in a heated area. Chemical neutralizers can be fitted to all KCH Fume Scrubbers. If required, complete metering and pumping systems can also be added.

KCH offers design, fabrication, and installation of control panels for completely automated scrubbing systems including conductivity, pH control, fresh water intake, static pressure monitoring, etc.
HEDRON is a four stage horizontal flow fume scrubber. Its versatile crossflow design allows the removal of corrosive or noxious fumes with high efficiency, making it one of the most popular designs available. The scrubber uses a constant recirculation system to keep the airflow saturated with water (see Scrubber Operation below). A remote recirculation tank is available for sub-zero climates.

HEDRON III horizontal fume scrubber utilizes an extended pack to insure scrubbing efficiency on low soluble fumes. This unit has provided excellent results when used on hydrofluoric, hydrochloric and nitric acids. Equipped with a constant recirculation system, the airflow is sprayed from the front while the packing is saturated from the top (see Scrubber Operation below). This unit is available with a remote recirculation system for sub-zero climates.

SCRUBBER OPERATION

The removal of contaminants is accomplished by slowing the fumes to a velocity below 500 feet per minute and then passing the fumes through the stages of scrubbing. The fumes pass first through a water spray during which some of the larger contaminated particles drop out and the remaining fumes are saturated. The second stage consists of a pack of polypropylene, non clogging, spherical type mass packing which is kept constantly wet by a continuous spray. The saturated fumes are impinged upon the packing and the contaminants are absorbed and carried away in the wash water.
Mist Eliminators

PVC, POLY-PRO, FRP, OR STAINLESS STEEL

SPECTRA I & II SERIES
HORIZONTAL FLOW CHEMICAL MIST ELIMINATOR

The KCH Spectra I & II series chemical mist eliminators were developed for use on moisture laden fumes containing dissolved chemicals. The contaminant removal takes place when the fumes pass through the one or two sets of PVC eliminator blades. The blades change the direction of the air many times resulting in entrapment of the contaminants on the blades. The unit is equipped with a wash down chamber for periodic cleaning of the blades.

SPECTRA III & IV SERIES
HORIZONTAL FLOW CHEMICAL MIST ELIMINATOR

The KCH Spectra III & IV Series chemical mist eliminators are designed as modifications of the Spectra II, utilizing the PVC eliminator blades as the first two stages, but adding one or two extra stages of higher efficiency mist elimination media. These units are very useful on tough chemical fumes such as chromic acid. The forward stages are equipped with wash down chambers for periodic cleaning. Each Spectra is designed for specific conditions and requirements and can reach ultra high efficiencies.

custom designed to MEET YOUR emission requirements
Mist Eliminators

PVC, POLY-PRO, FRP, OR STAINLESS STEEL

NEW!

SPECTRA U-SERIES

SELF-CLEANING MIST ELIMINATORS

KCH Services, Inc. the leader in chrome emission control introduces the new “Self Cleaning” Spectra U Series Mist Eliminators. This new innovative design eliminates costly downtime and lost production due to system shut down. With its unique “Self-Cleaning” design, it virtually eliminates the need for mesh pad removal and cleaning. This unit also has the capability to achieve the ultra high removal efficiencies required by the US EPA.

SPECTRA U SERIES

HORIZONTAL FLOW CHEMICAL MIST ELIMINATOR

Incorporating the latest technology available, the Spectra U is capable of providing efficiencies that exceed even the most stringent emission standard being considered by EPA and those in effect in California. With designed removal efficiencies of 99.999% on particles of 2 microns and greater and 99% on particles as miniscule as 1 micron, the Spectra U has demonstrated in field tests that it is capable of reducing emissions to under .004 milligram per ampere hour, far exceeding the California standard of .006 milligram per ampere hour.
SPECTRA III, IV, & V SERIES
HORIZONTAL FLOW
CHEMICAL MIST ELIMINATOR
SPECTRA U SERIES
HORIZONTAL FLOW CHEMICAL
MIST ELIMINATOR

CONTROL PANELS
KCH offers design and fabrication of
control panels for completely
automated washdown systems and
static pressure monitoring systems.
Mist Eliminators

PVC, POLY-PRO, FRP, OR STAINLESS STEEL

IN-LINE SERIES

HORIZONTAL FLOW MESH PAD MIST ELIMINATOR
The KCH horizontal flow mesh pad mist eliminator is designed for installation in a horizontal duct run. These units utilize one specifically designed mesh media to entrap particles of corrosive chemicals that may be carried in the air stream. This unit has a bolt-on access door and can be equipped with a spray chamber for periodic wash down. A drain trap and coupling is provided in the bottom.

IN-LINE SERIES

VERTICAL FLOW MESH PAD MIST ELIMINATOR
The KCH vertical flow mesh pad mist eliminator is designed for installation in a vertical duct run. These units are equipped with one specifically designed mesh pad media to entrap corrosive particles in the airstream. Each unit is complete with a sliding access door and drain.

MAGNA SERIES

CYCLONIC MOISTURE EXTRACTOR
The KCH MAGNA Series moisture extractors are designed to cause the contaminated air to move centrifugally through the unit causing moisture to collide with and run down the inside walls. Each unit is complete with a spray wash down ring and drain.

MIST-EL SERIES

OIL MIST EXTRACTOR
The KCH MIST-EL oil mist extractor combines a spinning action with packing media to insure high efficiencies in oil mist removal. Each unit is equipped with a 360 degree discharge so clean air can be exhausted back into the plant. All units come equipped with double inlets, FRP coated steel impeller, TEFC motor, direct drive, and drain.
Mist Eliminators

IN-LINE SERIES
HORIZONTAL FLOW
MESH PAD MIST ELIMINATOR

IN-LINE SERIES
VERTICAL FLOW
MESH PAD MIST ELIMINATOR
Centrifugal Blowers

PVC, POLY-PRO, OR FRP

Left: P.V.C. Exhaust Fan
Below: FRP NH Fans with Platforms

White PVC NH Fan with Outlet Transitions
P.V.C. CI Push Air Blower
The “AMCA Licensed” KCH NH-Series centrifugal type blower includes many features resulting in effective corrosion resistance, high volumes, reduced horsepower requirements, and low sound levels. The NH fan wheel is a backwardly inclined FRP coated steel wheel which is spark tested for integrity. The housing can be fabricated from either PVC, Poly-pro, or FRP. The inlet cone is heat formed for smooth air flow into the wheel. The “A” type frame is manufactured from heavy duty steel and epoxy coated for corrosion resistance. Each fan is supplied with belt drive TEFC motor, drain, shaft seal, outlet flange, and OSHA approved belt and shaft guards. The inlet is complete with either a flanged or flexible connector. The NH fan provides a stable efficiency through a broad range of operation resulting in lower operating costs to the customer throughout the life of the equipment.

NH-SERIES
CENTRIFUGAL EXHAUST BLOWERS

NH, CI, & RE SERIES
SPARE PARTS & ACCESSORIES

To better serve our customers KCH offers a complete line of replacement parts and accessories for each of our blower series. The available spare and replacement parts include belts, bearings, wheels, shafts, motors, as well as complete housings, epoxy coated steel frames, belt and shaft guards and flexible inlet connectors.
The "AMCA Licensed" KCH CI-Series is suitable for continuous operation from 300 to 3800 cfm at up to 18 inches of static pressure. Each blower is equipped with an FRP coated paddle wheel type impeller which is spark tested for integrity. The housing material can be PVC, Polyprop, FRP, or stainless steel. The frame is epoxy coated heavy duty steel. Each fan is complete with belt drive, TEFC motor, drain, inlet cone, and OSHA approved belt and shaft guards.

**LF-SERIES**
LABORATORY EXHAUST BLOWERS

The KCH LF-Series fans are compact, lightweight, completely corrosion resistant and maintenance free. These fans are direct driven and equipped with 8 inch inlets to match most lab hood outlets. The LF-Series fans are available in ranges of 40 to 700 CFM at up to 3-1/2 inches of static pressure.

**INLINE SERIES BLOWERS**

The KCH Inline Series exhaust blower is completely weatherproof and fully corrosion resistant. This tubular centrifugal inline blower offers straight airflow design for duct installations requiring minimal space, low noise characteristics, and high efficiency. These blowers can be fabricated from a wide variety of materials such as PVC, FRP, Polypropylene, Stainless Steel, and Epoxy coated carbon steel. Each unit is complete with TEFC motor with cover, formed inlet cone, backward inclined wheel, and V-belt drive.

The KCH RE-Series roof exhauster is completely weatherproof and fully corrosion resistant. The steel constructed fan wheel is FRP coated and spark tested to insure integrity. The housing and curb flashing are fabricated from high impact Polyvinyl Chloride. Each unit is complete with belt drive, TEFC motor, heat formed inlet cone, and OSHA type belt and shaft guards. The efficient centrifugal fan has a low noise level and a 360 degree air discharge.

*combining HIGH PERFORMANCE with reliable, quality construction*
CI-SERIES
CENTRIFUGAL EXHAUST & BLOWERS

RE-SERIES
CENTRIFUGAL ROOF MOUNTED EXHAUST BLOWERS
Hoods, Ducts, Fittings

B2L-SERIES
LOW PROFILE EXHAUST HOODS

BB-SERIES
UPRIGHT EXHAUST HOODS

BU-SERIES
UPRIGHT EXHAUST HOODS

BD-SERIES
LOW PROFILE EXHAUST HOODS

BA-SERIES
LOW PROFILE EXHAUST HOODS

BSL-SERIES
LOW PROFILE EXHAUST HOODS

All "KCH" exhaust hoods and fittings are fabricated to customer specifications or to industry standards.
DUCT AND CONNECTORS
ROLLED OR EXTRUDED DUCT AND FITTINGS

WYE BRANCHES
HEAT FORMED THREE-WAYWYES

REDUCERS AND LATERALS
TAPERS, ANGLED STUBS, AND BOOTS

STACK CAPS
NO LOSS, DAMPERED, OR RAIN CAPS

TRANSITIONS
HEATED FORMED SQUARE TO ROUNDS

ALSO AVAILABLE:
“FACTORY MUTUAL” APPROVED P.V.C.

DUCT SYSTEMS
from PVC to
POLYPRO to FRP
CUSTOM DESIGNED for individual applications
RECOMMENDED OPEN SURFACE TANK DESIGN DATA & EXHAUST VOLUME REQUIREMENTS FOR O.S.H.A. CONFORMANCE

GENERAL DESIGN DATA:
1. Duct velocity = 2,000 to 3,500 fpm
2. Entry loss = 1.78 slot VP plus duct entry loss
3. Maximum plenum velocity = 2,000 fpm
4. Slot velocity = 2,000 fpm
5. Provide ample area at small end of plenum
6. If hood length is 6 feet or greater, multiple takeoffs are desirable
   If hood length is 10 feet or greater, multiple takeoffs are necessary
7. Tank width (W) means the effective width over which the hood must pull air to operate
   Maximum pull with standard exhaust hood - 30”
   Tanks over 30” should have a hood on each side of tank, a push/pull system or shields
8. Liquid level to be at least 6 inches below bottom of slot

SELECTING EXHAUST RATES TO MEET O.S.H.A. REQUIREMENTS:
1. Pick appropriate treatment and solution from Table I.
2. See Table I. for minimum control velocity
3. See Table II. for exhaust rate based on control velocity

### TABLE I.—CONTROL VELOCITY TABLE

<table>
<thead>
<tr>
<th>OPERATION</th>
<th>MIN. CONTROL VELOCITY</th>
<th>TYPE OF SCRUBBER</th>
<th>OPERATION</th>
<th>MIN. CONTROL VELOCITY</th>
<th>TYPE OF SCRUBBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anodizing</td>
<td></td>
<td></td>
<td>Plating</td>
<td></td>
<td></td>
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<tr>
<td>Sulfuric</td>
<td>100</td>
<td>Single Pack</td>
<td>Sulfuric</td>
<td>100</td>
<td>Single Pack</td>
</tr>
<tr>
<td>Bright dip</td>
<td>150</td>
<td>&quot;Extended Pack&quot;</td>
<td>Hydrochloric</td>
<td>150</td>
<td>&quot;Extended Pack&quot;</td>
</tr>
<tr>
<td>Cleaning</td>
<td></td>
<td></td>
<td>Nitric</td>
<td>150</td>
<td>&quot;Extended Pack&quot;</td>
</tr>
<tr>
<td>Caustic or Electrolic Boiling (not)</td>
<td>75</td>
<td>None</td>
<td>Nitric/Hydrofluoric</td>
<td>150</td>
<td>&quot;Extended Pack&quot;</td>
</tr>
<tr>
<td>Caustic or Electrolic Boiling</td>
<td>100</td>
<td>Single Pack</td>
<td>Plating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hot Water Rinse</td>
<td></td>
<td></td>
<td>Acid Copper</td>
<td>100</td>
<td>Single Pack</td>
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<tr>
<td>Boiling</td>
<td>75</td>
<td>None</td>
<td>Chrome</td>
<td>150</td>
<td>Single Pack</td>
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<tr>
<td>Not Boiling</td>
<td>50</td>
<td>None</td>
<td>Copper Sulfate</td>
<td>75</td>
<td>Single Pack</td>
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<td></td>
<td></td>
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<td>Electrowless Nickel</td>
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<td>Single Pack</td>
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<td></td>
<td></td>
<td></td>
<td>Nickel</td>
<td>100</td>
<td>None</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Zinc</td>
<td>75</td>
<td>None</td>
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*OPTIONAL pH control system recommended for maximum efficiency

### TABLE II. MINIMUM RATE, CFM, PER SQUARE FOOT OF TANK AREA FOR LATERAL EXHAUST

<table>
<thead>
<tr>
<th>Required Minimum Control Velocity, FPM</th>
<th>CFM per sq. ft. to maintain required minimum control velocities at following exhaust rates (W/L) ratios</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.0-0.9</td>
</tr>
<tr>
<td>Hood along one side or two parallel sides of tank when one hood is against a wall or baffle. Also for a manifold along tank centerline.*</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>Hood along one side or two parallel sides of tank when one hood is against a wall or baffle.</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>75</td>
</tr>
<tr>
<td>75</td>
<td>110</td>
</tr>
<tr>
<td>100</td>
<td>150</td>
</tr>
<tr>
<td>150</td>
<td>225</td>
</tr>
</tbody>
</table>

*Use W as tank width in computing when manifold is along centerline or two parallel sides of tank.
RECOMMENDED SPECIFICATIONS FOR EXHAUST DUCT & EQUIPMENT

EXHAUST DUCT
All ventilation duct to be fabricated of Type 1, Grade 1 or Type 2, Grade 1, high impact P.V.C. Extruded Type 1 P.V.C. duct 6" diameter to 18" diameter will be acceptable where applicable.

All KCH systems are designed in accordance with the recommended practice of the American Conference of Governmental Industrial Hygienists and fabricated in accordance with (SMACNA) Sheet Metal and Air Conditioning Contractors National Association, manual on Thermo Plastic Construction.

All P.V.C. used in fabrication of KCH products is unplastized and conforms U.S. Commercial Standard CS 201-55 and also ASTM 1784-69, Type II, Grade 1 GP-538b, Type II, Grade GU. All P.V.C. conforms to ASTM standard D 635 and has a flame spread rating of 20.

FITTINGS—ROUND & RECTANGULAR DUCT
Flanges - To be made of P.V.C. Type 1 or Type 2 angle material formed and continuously welded to duct. 1.5 x 1.5 x .1875" (3/16) angle and 2" x 2" x .250" angle are used in relationship to duct sizes. Bolt holes to be .3125" (5/16) diameter for 25" stainless steel bolts and no more than six (6) inches apart on centers. Gasket material to be of soft mastic type or foam P.V.C.

Sleeves - To be formed from (3) inch wide flat P.V.C. material of a thickness equal to or greater than the wall thickness of duct to be joined. Welded to one end of duct section leaving one-half the sleeve length for adjoining section to slip into.

Elbows - To have a minimum center line radius of 1 1/2 times diameter unless field conditions make it impossible. Ninety degree elbows to have five (5) gores and forty-five degree elbows to have three (3) gores.

Branches - To enter main at no more than forty-five degrees (thirty degrees preferred) to direction of flow and wherever practical to enter on an enlarging taper section. Branches should not enter opposite each other. Branches to be continuously welded to main.

Taper Section - 1" change in diameter to 5" in length, where practical.

CONSTRUCTION - RECTANGULAR DUCT
All straight lengths to have formed corner construction for maximum strength. This includes taper sections where practical. Elbows to have welded corner construction.

INSTALLATION
All joints to be flanged or sleeved and made air-tight. Sleeves may be welded or cemented. Flanged joints should be provided at all connections where dismantling may be required. Ductwork should be fitted with saddle bends at 8" to 12" centers suspended with all thread rod. Ductwork should also be suspended at each change in direction.

WELDING
Welding shall be done by the hot air fusion welding method for P.V.C. and hot gas fusion method for poly propylene. Ductwork, hoods and similar air passage enclosures must be finished completely air and water tight. Ductwork shall be completely free from cracks distortion or other imperfections.

EXHAUST BLOWERS
Exhaust blowers shall be centrifugal, arrangement 9 with backwardly inclined wheels Type NH and Type CI Paddle Wheel as manufactured by KCH Services, Inc. Wheels shall be steel with FRP coating, fiberglass or stainless steel. Coating will be spark tested to insure integrity. Housing shall be constructed of Type 2, Grade 1, high impact P.V.C. Frames shall be steel with coating. All blowers shall be equipped with a vacuum formed inlet cone, drain, access door, O.S.H.A. approved belt and shaft guards and flexible inlet and flanged outlet. All exhaust blowers shall carry a one year replacement guarantee against failure due to corrosion. Fans are to be balanced prior to shipment.

FUME SCRUBBERS
KCH Services' wet type fume scrubbers shall meet the following specifications:

MATERIAL
Fume scrubbers shall be constructed of Type 1, or Type 2, P.V.C., Polypropylene, or FRP. Scrubbers to be complete with epoxy coated steel base of sufficient strength to make unit self-supporting. All in-scrubber piping shall be P.V.C. or Polypropylene. Spray nozzles shall be full cone, non-clogging, open orifice type.

SCRUBBING & ELIMINATING SURFACE
A packed scrubber bed at least 12" deep shall be provided. The packing material shall consist of corrosion resistant, non-clogging packing media shapes with a minimum surface area of 40 sq. ft. per cu. ft. The scrubbing section shall be constantly wetted by non-clogging, continuous flow spray nozzles, and overhead weir. A minimum 8" deep mist eliminator section shall be provided. This shall consist of vertically mounted P.V.C. eliminators providing at least four (4) changes in direction of the air flow and eliminate entrained water from the air stream before it leaves the scrubber. Scrubbers shall be sized for a maximum of 500 F.P.M. at the packing face. A pre-wet section shall be provided at the entrance to the scrubber consisting of a bank of spray nozzles headed into the air stream. The nozzles shall be sufficient in number to blanket the inlet cross section with mist. Overhead weir to be used when complete, continual saturation is required. A flow meter shall be provided at the fresh water inlet. Water, tight access doors shall be provided to permit easy access to scrubber bed and eliminators for maintenance purposes and to permit inspection while in use. Inlet and outlet openings shall be fitted.

EXHAUST HOODS
All exhaust hoods are to be fabricated of Type 1 or Type 2, Grade 1, high impact P.V.C., poly propylene or FRP. The basic hood shape shall be fabricated of .1875" (3/16) thick P.V.C. All P.V.C. sheet used as reinforcing to be .25" (1/4) thick P.V.C. angle, spaced not greater than 12" c.c. shall be used internally to reinforce slot dividers on vertical type hoods. All lip type hoods to have top and bottom of slot section reinforced with .25" (1/4) P.V.C. Additional P.V.C. reinforcing shall be used as required to strengthen the hood at critical points and prevent warping. P.V.C. exhaust hoods shall be fabricated basically by hot welding, but welds will not be allowed at corners along the length of the hood. All such corners are to be heat formed. All welded joints shall be welded inside and out whenever possible. All hoods are to be equipped with a means of preventing liquid from accumulating in the bottom. Hoods having a plenum lower than the lowest slot shall have a drain crease in the bottom with a 1/4" threaded coupling. All hoods shall be equipped with an outlet connection as indicated on the drawings.
KCH Engineered Systems are designed, fabricate and professionally installed, cost effective, and space efficient to comply with all your pollution control and plating needs.