SPECIFICATIONS

RADIOISOTOPE
CONSTANT AIR VOLUME
BENCH MOUNT FUME HOODS

1.04 REFERENCE STANDARDS

.1 Canadian Nuclear Safety Commission: GD – 52 Design Guide for Nuclear Substance, Laboratories and Nuclear Medicine Rooms.

.2 ANSI/ASHRAE 110 Latest Edition: Method of Testing Performance of Laboratory Fume Hoods

.3 SEFA 1 Latest Edition: Laboratory Fume Hoods

.4 SEFA 8-M Latest Edition: Laboratory Grade Metal Casework

.5 MD15128 Latest Edition: Laboratory Fume Hoods

.6 CSA Z316.5 Latest Edition: Fume hoods and associated exhaust systems

.7 ANSI/AIHA Z9.5 Latest Edition: Laboratory Ventilation

.8 CAN/CSA-C22.2 No. 61010-1-12 + UI;U2; AI UL61010-1:2012 Ed. 3+R21 Nov2018 Safety Requirements For Electrical Equipment For Measurement, Control, And Laboratory Use -Part 1: General Requirements.

.9 UL1805 Latest Edition: Laboratory Hoods and Cabinets

.10 NFPA 45 Latest Edition: Protection for Laboratories Using Chemicals, Chapter 6, Laboratory Ventilating Systems and Hood Requirements

.11 WorkSafeBC Latest Edition: Policies Part 30, Fume Hood (Ventilation Systems)

1.05 DESIGN REQUIREMENTS

.1 Fume hood shall be designed to function as an enclosed ventilated workspace. Its purpose is to protect the operator from harmful fumes and vapors generated within the enclosure and from a fire or explosion as the result of an ignition.

.2 It shall perform these functions by capturing, containing and exhausting the fumes safely and efficiently out the enclosure and by utilizing the sliding safety glass sash as a shield for the operator's face and body.

.3 Fume Hood shall be for Radioisotope use only and will not be connected other exhaust systems.

.4 **Accessibility for Person With Disabilities (ADA):**

.1 Where shown on the laboratory drawings, provide fume hoods accommodating persons with disabilities in accordance to Federal, Provincial and local regulations having jurisdiction.

.2 The height of the highest point of access to the work surface above finished floor shall not exceed (860mm (34").

.3 Sash operation, mechanical fixtures, both handles and nozzles, sinks, electrical receptacles, switches and low air flow alarm shall be at a location and height off finished floor to be considered accessible.

.4 Refer to the H.H. Hawkins Ltd. Accessible – ADA fume hood catalog section for wheel chair accessibility requirements.

.3 Fume hoods will be complete with supporting base cabinets, if specified under this section, factory installed electrical fittings, mechanical service fixtures, low airflow alarm/ monitor and accessories as listed under this section. See 2.05.11.

.4 Supply and Installation of the fume hood and supporting base cabinets, are to be by the hood manufacturer as described under this section. Final mechanical and electrical connections to the building utilities are by others.

.5 **Constant Air Volume (CAV) Full By-Pass type:** Face Velocity and sash operating height to be determined by the project design group and owner.

.1 Fume hoods shall maintain a relative constant exhaust volume at any sash opening from 685mm (27") full open to 150mm (6") open.

.1 Maximum variation as a result of sash position shall not exceed 5% of the specified exhaust volume.

.2 By-Pass shall limit face velocity from increasing more than fourfold as sash is lowered from full open 685mm (27") to 150mm (6") open.

.3 Static Pressure Loss: Fume hood shall be designed to minimize static pressure loss. Based on an 1825mm (72") wide unit, average static

pressure loss, taken at four points 90 degrees apart, at least two duct diameters above the fume hood exhaust collar, shall not exceed:

1. Sash full open 680mm (27”);

Face Velocity	Static Pressure (W.G.)
0.40m/s (80 FPM)	55Pa (0.22 inches)
0.50m/s (100 FPM)	85Pa (0.34 inches)

2. Sash open 450mm (18”)

Face Velocity	Static Pressure (W.G.)
0.40m/s (80 FPM)	25Pa (0.10 inches)
0.50m/s (100 FPM)	42Pa (0.17 inches)

.4 Noise Level: When measured on the ‘A’ scale noise generated by the fume hood shall not exceed 60dBA when measured 6" in front of the sash.

.5 Illumination: Average illumination in the work area will be a minimum of 80 candles where the work area is defined as being from side to side, from back baffle to sash line and from work surface to a height of 30".

.6 Fume hood shall be have front loading type mechanical service fixtures and electrical fittings as specified herein. Mechanical fixtures will be factory pre-piped from outlet to valve and electrical fittings will be pre-wired to a junction box on the top of the fume hood. All mechanical and electrical hookup to building services will be by the respective sub-trades.

.1 Factory pre-piping of mechanical services from valves to a point 150mm (6”) above or below the fume hood superstructure is **optional.**

.7 Fume hoods shall be available in standard widths of 1220mm (48”) 1525mm (60”), 1830mm (72”) and 2440mm (96”).

1.06 PERFORMANCE REQUIREMENTS

.1 Fume hoods shall be tested and certified and accordingly labeled to Canadian Standards Association (CSA), Underwriters Laboratories (UL) and UL1805 Latest Addition.

.1 CSA/UL:

.1 Electrical Equipment for Measurement, Control, and Laboratory Use; Part 1: General Requirements [UL 61010-1:2012 Ed.3+R:16Nov2018]
.2 Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use Part 1: General Requirements [CSA C22.2#61010-1-12:2012 Ed.3+U1;U2;A1]
.3 Proper labeling must be affixed to the front of each fume hood listing the classification approvals.

.2 UL1805:

.1 Laboratory Hoods and Cabinets [UL 1805:2002 Ed.1+R:02Jun2006].
.2 The UL1805 standard covers both electrical and mechanical hazards in addition to the flammability of materials and the airflow characteristics.
.3 Proper labeling must be affixed to the front of each fume hood listing the classification to the UL 1805 standard for Laboratory Fume Hoods. UL listings covering electrical fittings only and which do not include all items covered in UL 1805 will not be accepted.
.4 All testing shall be performed in an accredited National Recognized Testing Laboratory (NRTL) test facility.

.2 Containment Testing - “As Manufactured” (AM):

.1 Single sided bench mount fume hoods will be performance tested to the ASHRAE 110 - Latest Edition, Method of Testing Performance of Laboratory Fume Hoods. The method of testing consists of the following three tests:
    .1 Flow Visualization using Local and Large volume smoke challenges
    .2 Face Velocity Measurements/Profile
    .3 Tracer Gas Containment

.2 The manufacture’s fume hood shall be capable of achieving an “As Manufactured” (AM) rating of better than 0.05 PPM at 4 litres per minute (4 AM 0.05) with the vertically rising sash in the full open (27”) position.

.3 Unless otherwise specified, previous test results obtained on the manufacture's identical hood design and size to the ones specified herein will be acceptable.

.4 Test reports shall be made available on request.

.3 Manufacture's Test Facility:

.1 All "As Manufactured" (AM) tests shall be performed in the manufacture's fume hood testing facility.

.2 Room shall be of adequate size to provide unobstructed clearance of at least five feet each side and ten feet in front of fume hood.

.3 Make-up air will be provided to replace the room air exhausted through the fume hood and be capable of maintaining 0.02" w.g. negative pressure.

.4 Make-up air will be provided in a manner that keeps cross drafts in front of hood to less than 0.15m/s (30fpm).

.5 Room ventilation system will be capable of testing fume hoods to face velocities of between 0.30m/s (60 fpm) through 0.51 (100 fpm).

.6 All testing and reports shall be performed and submitted by a third party testing company specializing in this type of certification.

1.07 WARRANTY

.1 Provide a written 1-year warranty for parts, materials, workmanship and labour. Product will be free of defects from date of final acceptance of the fume hood.

.2 Warranty shall not cover damage due to misuse, chemical attack or using the hood not for its design and intended use.

.3 The manufacturer or fume hood supplier shall repair or replace any products found to be defective at no cost to the owner.

.4 Replacement will include any parts, labor, shipping, and travel expenses involved.

1.08 SUBMITTALS

.1 Shop drawings:

.1 Fume hood manufacturer will provide shop drawings, in Autodesk Rivet showing:

.1 Front, top and section views.
.2 Exhaust volumes/static pressures at design Sash Operating Height and face velocity.
.3 Complete dimensioning.
.4 Mechanical rough-in locations.
.5 Product materials overview.
.6 Liner material description.
.7 Work surface description.
.8 Seismic fastening/bracing, if required.
.9 Wiring diagram.
.10 Location and type of mechanical and electrical service fixtures, connection points.
.11 Mechanical service fixture pre-piping.
.12 Exhaust collar locations and diameters.
.13 Supporting base cabinets, if by this section.

.2 Samples:

.1 One set manufacture’s colour chips for the full range of standard colours. Submit the following.

.1 76mm X 76mm (3” X 3") sample of manufactures standard colours.
.2 100mm X 100mm (4” X 4") sample of liner lining material(s).
.3 100mm X 100mm (4” X 4") sample of counter top material(s).

.3 Product data sheets:

.1 Submit manufacturer's product data sheets and/or catalog pages for each mechanical and electrical component.

.1 Electrical Device Listing: All electrical components shall be listed and labeled as being approved a Nationally Recognized Testing Laboratory (NRTL).

.2 Performance Test Reports:

.1 Submit a test report from a third party fume hood testing agency listing testing criteria that the fume hood types and sizes on this project have been tested to ANSI/ASHRAE-110 Latest Edition "As Manufactured" (AM).

.2 Submit a written report on each hood type and size certification that the fume hood(s) to be provided passed the tests defined in 1.06 PERFORMANCE.

2.0 PRODUCTS

2.01 Specification based on products manufactures and supplied by:

H.H. Hawkins Ltd.
107 - 19298 21st Avenue
Surrey, British Columbia, Canada V3Z 3M3
1.800.661.4454 www.hhhawkins.com

2.02 MANUFACTURE'S QUALIFICATIONS

.1 Work under this Section will be by a single manufacturer or supplier in accordance with best industry practices.

.1 Manufacturer shall have a minimum of 5 years' experience in the manufacture, supply and installation of Laboratory Fume Hoods and their related components.

2.03 ALTERNATES TO SPECIFIED PRODUCT(S)

.1 Proposals for substitutions of Products and Materials must be submitted in accordance with consultant and/or owner requirements.

.2 Consultant will review submissions with-in the time frame listed under Division 1 General Requirements. Bid Closing Date will not be extended due to the time required by the Consultant to review the submission and issue an any Addenda.

.3 Submission requirements:

.1 Description of proposed Alternate with detailed comparison specification of proposed substitution with the specified Product listing any deviations to the specified Product(s).

.2 Manufacturer's Product data sheets and catalog pages for proposed Products.

.3 "As Manufactured" (AM) test report for each size and type of fume hood required for this project, per 1.06.3.

2.04 MATERIALS

.1 Steel: High quality cold rolled mild steel conforming to ASTM A366. Gauges shall be U.S. standard.

.2 Stainless steel: Type 304 or 3I6, number 4 finish. Gauges shall be U.S. standard.

.3 Safety glass: 6mm (7/32") laminated safety glass.

.4 Sash cables: Stainless steel, aircraft grade, uncoated, 3 mm (1/8") diameter.

.5 Cable pulleys: Plastic, ball bearing type, 40 mm (1 1/2") diameter, complete with cable retaining device.

.6 Sash tracks: Poly-vinyl chloride (PVC), corrosion resisting.

.7 Sash pull: Stainless steel, full length, low profile slotted design, I8 gauge, type 316, number 4 finish.

.8 Lower air foil: Stainless steel, 16 gauge, type 316, number 4 finish.

.9 Fasteners:

.1 Interior fastener devices: Stainless steel.

.2 Exterior panel fastener devices: Concealed.

.3 Hidden exterior structure members: Sheet metal screws, zinc coated.

.10 Operating/ Safety Instruction Label:

.1 Plastic label attached to the front exterior of the hood superstructure listing suggested operating instructions and safety information.

2.05 CONSTRUCTION

.1 Bench Mount Radioisotope Fume Hoods

.1 **Superstructure:**

.1 Heavy-duty galvanized steel framework, double wall construction, rigid and self-supporting. Maximum wall thickness shall be 120 mm (4¾").

.2 Double Wall Construction: Double wall is made up of a powder coated baked enamel steel exterior and a chemical resisting inner liner. Double wall houses and conceals framing, electrical boxes and wiring and mechanical service fixture valves and piping.

.3 Exterior End Panels: Two piece construction, are independently mounted with the upper side panels being secured with hidden fasteners and are removable with without tools.

.4 Front Upper Panel: Secured with hidden metal fasteners and are removable without tools.

.5 Front Posts: House electrical receptacles, light switch, low airflow alarm and mechanical service fixture handles. Cutouts for electrical and mechanical services are only provided where there are needed. Blank cover plates and plastic plugs shall not be allowed.

.6 Front Opening: Front air foil style opening with 45° front posts, side and upper fascia panels fabricated from I8 gauge sheet steel with a baked electrostatic powder coat finish.

.7 Lower Air Foil Opening: Fabricated of I6 gauge, type 3I6 stainless steel, number 4 finish. A slot between its underside and the work surface shall provide a constant flow of air across the work surface and allowing access for oversize electrical plugs.

.2 **Interior Liner**: Refer to 2.05.4

.1 Type 304 **or** type 316 stainless steel.

.2 Liner shall be attached to the concealed steel framework forming a rigid and completely sealed chamber.

.3 Interior Access Panels: Will not be provided unless specifically required. If required they will be air tight and will not require gaskets.

.3 **Sash:**

.1 **Vertically Rising**:

.1 Sash is a "Full View" type with the front vertical view height being 915 mm (36') including the fixed view panel. The maximum sash opening is 685 mm (27").

.2 Fully counter balanced using a single center hung weight running behind the hood and utilizing a continuous stainless steel sash cable with plastic ball bearing pulleys. Sash assembly will provide exact and positive operation and prevent sash drop in the event of the failure of the sash cable.

.3 Pulleys shall be complete with cable retaining devices. Sash shall open and close against rubber bumpers.

.4 Sash Pull is a slotted low profile design, is full length and fabricated I8 gauge type 316, number 4 finish stainless steel.

.5 Sash stops shall be provided at the 450mm (18") open position unless otherwise specified. They shall have a manual override when lowering the sash below the 450mm (18") opening and an automatic reset when the sash is raised above the 450 (18") open position.

.4 **Liner Material:**

.1 **Stainless Steel, all welded (SW-RI)**

.1 Type 316 (SW-RI6) OR Type 304 (SW-RI4) stainless steel (choose one), 16 gauge, number 4 finish, all welded seamless construction. Interior comers have a 3/4" radius and all welds are ground and polished.

.2 Liner has an integrally welded work surface with a 1/2" high anti-spill front lip. The underside is reinforced with metal channels to support lead shielding and to prevent twisting, oil-canning or buckling.

.3 Stainless steel is not recommended for use with chemicals containing chlorides such as Hydrochloric Acid, Hydrofluoric Acid and Sulphuric Acid to 80% solution.

.4 Exhaust collar is integrally welded type 316 stainless steel.

.5 **Baffles:**

.1 Three-piece construction, fabricated from the same material as the fume hood liner. Full width horizontal exhaust slots are located at the top, bottom and midpoint with side vertical slots running full height.

.2 Are factory sized and fixed in place for optimum containment per ASHRAE II0 Latest Edition Tracer Gas Testing.

.6 **Exhaust Collar:**

.1 Type 316 stainless steel integrally welded, bell shaped, is round in configuration and does not require transitions from rectangular to round. Diameters will be as detailed.

.7 **Ceiling closure panels** (Optional):

.1 Fabricated from the same material and gauges as the fume hood exterior.

.2 Panels are set-back design to allow for proper by-pass air operation and to allow the for the removal of the front panel and side panels.

.3 Colour to match fume hood exterior.

.8 **Seismic Anchors** (Where asked for):

.1 Provide seismic anchors for fume hoods and cabinets below fume hoods (if supplied by this section). Anchors will be designed to be removable where access is required for persons with disabilities.

.9 **Electrical:**

.1 LED light fixture is installed on the outside top of fume hood interior with removable housing for ease of lamp replacement.

.1 Light fixture is isolated from the fume hood interior by means of a vapour sealed laminated safety glass panel cemented and sealed in place.

.2 Average illumination in the work area will be a minimum of 80 candles where the work area is defined as being from side to side, from back baffle to sash line and from work surface to a height of 30".

.2 Two I20 volt 20 amp duplex grounding type receptacles and light switch are provided on the front posts of the hood exterior.

.3 All electrical fixtures are to be factory installed and pre-wired to a junction box on top of the hood.

.4 Fume hood shall be certified to the following Standards:

.1 CAN/CSA-C22.2 No. 61010-1-12 + U1; U2;A1 UL 61010-1:2012
Ed.3+R:21Nov2018 and UL1805:2002

.10 **Work Surfaces:**

.1 **Stainless Steel**

.1 Work Surface is integrally welded to the liner and has a 1/2" high anti-spill front lip. The underside is reinforced with metal channels to support lead shielding and to prevent twisting, oil-canning or buckling.

.2 Sinks are flush mount and integrally welded into the work surface.

.11 **Base Cabinets:** Delete those **NOT** required

.1 **General Storage:**

.1 Steel construction.
.2 Are non-lined and have a full depth adjustable shelf.
.3 Cabinets are welded steel construction, are rigid and self-supporting.
.4 The minimum metal gauges used in the casework fabrication shall be as follows and as recognized by North American standards:
    .1 11 gauge (3.2mm) for top and front rails
    .2 14 gauge (1.7 mm) for leveling devices
    .3 18 gauge (1.2mm) for all remaining cabinet component including cabinet frame and shelves.
.5 Leveling devices are installed on each corner and are accessible from the inside of the cabinet
.6 Cabinets are 535mm (21”) deep.
.7 Cabinet widths as shown on drawings.
.8 Finish to be per 2.06 Exterior Finish.

.2 **Acid Storage:**

.1 Steel construction.
.2 Are designed and constructed for the storage of acids and corrosive chemicals, not flammable or combustible chemicals. Door fronts to be labeled “ACIDS” or “BASES”.
.3 Cabinet exteriors are welded steel construction, are rigid and self-supporting.

.4 The minimum metal gauges used in the casework fabrication shall be as follows and as recognized by North American standards:

.1 11 gauge (3.2mm) for top and front rails
.2 14 gauge (1.7 mm) for leveling devices
.3 18 gauge (1.2mm) for all remaining cabinet component including cabinet frame and shelves.

.5 Interior lining is all welded one piece construction fabricated of 6mm (1/4") thick from white low-density polyethylene. Interior of doors are lined with the same material and have upper and lower vent slots.

.6 Shelf is reinforced, full depth, two position, high density polyethylene.

.7 The floor of the cabinet has a 25mm (1") anti-spill front edge. Cabinet will be provided with 40mm (1 1/2") PVC fittings and tubing for venting the cabinet into the fume hood.

.8 Leveling devices are installed on each corner and are accessible from the inside of the cabinet.

.9 Cabinets are 535mm (21") deep.

.10 Also available 460mm deep (18").

.11 Finish to be per 2.06 Exterior Finish.

.3 **Solvent/Flammable Storage:**

.1 Steel construction.

.2 Designed for the storage flammable and combustible liquids and not for the storage of acids and corrosives. Door fronts to be labeled "FLAMMABLE- KEEP FIRE AWAY".

.3 Cabinets meet O.S.H.A. Standard 1910-106 (d)(3) and comply with NFPA 30 Flammable and Combustible Liquids. They are UL 1275/UL1275C UL labeled.

.4 Cabinets is fabricated from 1.2mm (18 gauge) steel with a baked electrostatic powder coating. The top, sides, floor and doors are double wall construction with fire-proof insulation between providing a 40mm (1 1/2") insulating air space all around.

.5 The floor is recessed 50mm (2") to contain spills. Doors are manual-closing with lever handle and are three point locking devise. Self-closing doors are optional.

.6 Upper and lower air vents with spark arrestors and removable threaded covers are installed on the back of the cabinets. NOTE: It is not recommended to vent the cabinets into fume hood or fume hood exhaust ducting.

.7 Cabinets are 535mm (21") deep.

.8 Also available 460mm deep (18").

.9 Standard colour is "Caution Yellow".

.10 Finish to be per 2.06 Exterior Finish.

.4 **Vacuum Pump:**

.1 Steel construction.

.2 Construction is to UL962A/CSA22.2 #203 certified.

.3 The minimum metal gauges used in the casework fabrication shall be as follows and as recognized by North American standards:

- .1 11 gauge (3.2mm) for top and front rails
- .2 14 gauge (1.7 mm) for leveling devices
- .3 18 gauge (1.2mm) for all remaining cabinet component including cabinet frame and shelves.

.4 Leveling devices are installed on each corner and are accessible from the inside of the cabinet.

.5 Inside of cabinet (back, sides and top) are lined with CB-300 sound deadening insulation. To protect the sound deadening insulation, a perforated painted steel lining is welded to the cabinet doors, back, sides and top.

.6 A 100lb capacity full extension pull out pan on the bottom of the cabinet is standard.

.7 One duplex electrical outlet 120V/15–20 A is located on the inside back of the cabinet, one 15A pump switch with a 4.90A thermal overload is located on the exterior top panel of the cabinet.

.8 A 2" (51mm) diameter vent port at the top left corner of the cabinet back and a 1 1⁄2" (38mm) pipe on the back right side of the cabinet top for end-user supplied piping is standard.

.9 Optional "CPU" for additional venting available
.10 Cabinets are 535mm (21") deep.
.11 Also available 460mm deep (18").

.12 **Mechanical Service Fittings: Broen-Lab**

.1 Valves are front loading type and factory pre-piped from valve to outlet in the fume hood.
.2 Goosenecks and nozzles are colour coded to their handles in accordance with SEFA7 - 2018.
.3 Fittings are CSA and CGA approved.
.4 Valve Bodies: One piece construction, cast or forged brass with a minimum copper content of 57%.
.1 Cold Water: Ceramic compression ball valve with double sealed Uniflex connection, 1X180 degree turn open to close.
.2 Technical Gases (except vacuum): Brass needle valve, 3X360 degree turn open to close. Double sealed Uniflex connection.
.3 Vacuum: Brass needle valves, 1/4 turn open to close function. Double sealed Uniflex connection.
.4 Burning gases: Brass needle valve, 1/4 turn open to close with Push-In POP-UP safety handle for visual safety.

.5 Fixtures exposed to hood interior:
.1 One piece construction, cast or forged brass with a minimum copper content of 57%.
.2 Finish is a chemical resisting polyester powder coating. Colour is white/ grey.
.3 Goosenecks and nozzles are colour coded to their handles in accordance with SEFA7 - 2018.
.6 Handles:
.1 Polypropylene construction four-arm handle colour coded conforming to SEFA7-2018.
.2 Accessible Use (ADA): One hand operated remote control handles with brass ball valve, 1/4 turn open to close. Maximum pressure to active shall not exceed 5 pounds (22.2N).

.13 **Low Airflow Alarm/Monitor:** Delete those **NOT** required

.1 **Model AFA4000/1** factory installed low airflow monitor and alarm system:

.1 Built in sidewall airflow sensor for measuring and monitoring face velocity.
.2 Full-colour 3.5" LCD display.
.3 Digital face velocity display in fpm or m/s.
.4 Visual and audible alarms.
.1 Graphic display: Green LED = Safe, Amber LED = Caution, Red LED = Alarm
.2 Alarm Indication: Red graphic with audible . alarm.
.3 Audible alarm can be silenced but Red graphic will stay active until alarm condition is corrected.
.5 Two point alarm capture pushbutton calibration.
.6 BACnet and Modbus on board available with optional comms adaptor.
.7 Alarm is low voltage and is supplied with a transformer.

.2 **Model AFA1000** factory installed low airflow monitor and alarm system:

.1 Built in sidewall airflow sensor for measuring and monitoring face velocity.
.2 Back-lit LCD display.
.3 Digital face velocity display in fpm or m/s.
.4 Visual and audible alarms.
.1 Indicator display: Green LED = Safe, Amber LED = Caution, Red LED = Alarm
.2 Alarm Indication: Red graphic with audible alarm.
.3 Audible alarm can be silenced but Red graphic will stay active until alarm condition is corrected.
.5 Two point alarm capture pushbutton calibration.
.6 BACnet and Modbus on board available with optional comms adaptor.
.7 Alarm is low voltage and is supplied with a transformer.

.3 **Model AFA500** factory installed low airflow monitor and alarm system:

.1 Built in sidewall airflow sensor for measuring and monitoring face velocity.

.2 Audible alarm with mute button.

.1 Visual alarm with Green LED = Safe and Red LED light = Alarm.

.2 Audible alarm can be silenced but Red LED will stay active until alarm condition is corrected.

.3 Single Alarm Point Capture pushbutton calibration.

.4 Relay input for Night Setback to mute audible alarm.

.5 Alarm is low voltage and is supplied with a transformer.

2.06 EXTERIOR FINISH

.1 Prior to the start of the painting process, all surfaces will be cleaned and be free of scratches, spot weld marks or other material imperfections. Welds shall be ground smooth.

.2 Components will be thoroughly washed using a three stage metallic phosphate process for proper surface preparation, superior bonding and to eliminate humidity.

.3 An electrostatically applied chemical resistant powder coat finish will then be applied to all individual parts including the interior of door and drawer panels. Components will pass through a baking process with the time and temperature as recommended by the paint manufacturer.

.4 Painted surfaces shall conform to A.A.M.A. 2603 and shall meet or exceed the SEFA 8 specification for chemical resistance as specified by the “Scientific Equipment and Furniture Association”

.5 Metal Surface Finish Testing:

.1 All metal finishing testing will be to the latest SEFA 8 standards, item 10.0 Cabinet Surface Finish Tests.

.2 Third party, independent test reports will be available upon request.