LINCOLN ELECTRIC

Operator's Manual

Modular Fume Hood™

For use with machines having Code Numbers:

AD1234-80 thru AD1234-134

GENUINE LINCOLN PARTS™

Register your machine:
www.lincolnelectric.com/register

Authorized Service and Distributor Locator:
www.lincolnelectric.com/locator

Save for future reference

Date Purchased

Code: (ex: 10859)

Serial: (ex: U1060512345)

IM10014-A | Issue Date Dec-17

THE LINCOLN ELECTRIC COMPANY
22801 St. Clair Avenue • Cleveland, OH • 44117-1199 • U.S.A.
Phone: +1.216.481.8100 • www.lincolnelectric.com

THANK YOU FOR SELECTING A QUALITY PRODUCT BY LINCOLN ELECTRIC.

PLEASE EXAMINE CARTON AND EQUIPMENT FOR DAMAGE IMMEDIATELY

When this equipment is shipped, title passes to the purchaser upon receipt by the carrier. Consequently, claims for material damaged in shipment must be made by the purchaser against the transportation company at the time the shipment is received.

SAFETY DEPENDS ON YOU

Lincoln arc welding and cutting equipment is designed and built with safety in mind. However, your overall safety can be increased by proper installation ... and thoughtful operation on your part. **DO NOT INSTALL, OPERATE OR REPAIR THIS EQUIPMENT WITHOUT READING THIS MANUAL AND THE SAFETY PRECAUTIONS CONTAINED THROUGHOUT.** And, most importantly, think before you act and be careful.

⚠ WARNING

This statement appears where the information must be followed exactly to avoid serious personal injury or loss of life.

⚠ CAUTION

This statement appears where the information must be followed to avoid minor personal injury or damage to this equipment.

KEEP YOUR HEAD OUT OF THE FUMES.

DON'T get too close to the arc. Use corrective lenses if necessary to stay a reasonable distance away from the arc.

READ and obey the Safety Data Sheet (SDS) and the warning label that appears on all containers of welding materials.

USE ENOUGH VENTILATION or exhaust at the arc, or both, to keep the fumes and gases from your breathing zone and the general area.

IN A LARGE ROOM OR OUTDOORS, natural ventilation may be adequate if you keep your head out of the fumes (See below).

USE NATURAL DRAFTS or fans to keep the fumes away from your face.

If you develop unusual symptoms, see your supervisor. Perhaps the welding atmosphere and ventilation system should be checked.

WEAR CORRECT EYE, EAR & BODY PROTECTION

PROTECT your eyes and face with welding helmet properly fitted and with proper grade of filter plate (See ANSI Z49.1).

PROTECT your body from welding spatter and arc flash with protective clothing including woolen clothing, flame-proof apron and gloves, leather leggings, and high boots.

PROTECT others from splatter, flash, and glare with protective screens or barriers.

IN SOME AREAS, protection from noise may be appropriate.

BE SURE protective equipment is in good condition.

Also, wear safety glasses in work area **AT ALL TIMES.**

SPECIAL SITUATIONS

DO NOT WELD OR CUT containers or materials which previously had been in contact with hazardous substances unless they are properly cleaned. This is extremely dangerous.

DO NOT WELD OR CUT painted or plated parts unless special precautions with ventilation have been taken. They can release highly toxic fumes or gases.

Additional precautionary measures

PROTECT compressed gas cylinders from excessive heat, mechanical shocks, and arcs; fasten cylinders so they cannot fall.

BE SURE cylinders are never grounded or part of an electrical circuit.

REMOVE all potential fire hazards from welding area.

ALWAYS HAVE FIRE FIGHTING EQUIPMENT READY FOR IMMEDIATE USE AND KNOW HOW TO USE IT.

SECTION A: WARNINGS

CALIFORNIA PROPOSITION 65 WARNINGS

WARNING: Breathing diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects, or other reproductive harm.

- Always start and operate the engine in a well-ventilated area.
- If in an exposed area, vent the exhaust to the outside.
- Do not modify or tamper with the exhaust system.
- Do not idle the engine except as necessary.

For more information go to www.P65 warnings.ca.gov/diesel

WARNING: This product, when used for welding or cutting, produces fumes or gases which contain chemicals known to the State of California to cause birth defects and, in some cases, cancer. (California Health & Safety Code § 25249.5 *et seq.)*

WARNING: Cancer and Reproductive Harm www.P65warnings.ca.gov

ARC WELDING CAN BE HAZARDOUS. PROTECT YOURSELF AND OTHERS FROM POSSIBLE SERIOUS INJURY OR DEATH. KEEP CHILDREN AWAY. PACEMAKER WEARERS SHOULD CONSULT WITH THEIR DOCTOR BEFORE OPERATING.

Read and understand the following safety highlights. For additional safety information, it is strongly recommended that you purchase a copy of "Safety in Welding & Cutting - ANSI Standard Z49.1" from the American Welding Society, P.O. Box 351040, Miami, Florida 33135 or CSA Standard W117.2-1974. A Free copy of "Arc Welding Safety" booklet E205 is available from the Lincoln Electric Company, 22801 St. Clair Avenue, Cleveland, Ohio 44117-1199.

BE SURE THAT ALL INSTALLATION, OPERATION, MAINTENANCE AND REPAIR PROCEDURES ARE PERFORMED ONLY BY QUALIFIED INDIVIDUALS.

FOR ENGINE POWERED EQUIPMENT.

1.a. Turn the engine off before troubleshooting and maintenance work unless the maintenance work requires it to be running.

1.b. Operate engines in open, well-ventilated areas or vent the engine exhaust fumes outdoors.

1.c. Do not add the fuel near an open flame welding arc or when the engine is running. Stop the engine and allow it to cool before refueling to prevent spilled fuel from vaporizing on contact with hot engine parts and igniting. Do not spill fuel when filling tank. If fuel is spilled, wipe it up and do not start engine until fumes have been eliminated.

1.d. Keep all equipment safety guards, covers and devices in position and in good repair. Keep hands, hair, clothing and tools away from V-belts, gears, fans and all other moving parts when starting, operating or repairing equipment.

1.e. In some cases it may be necessary to remove safety guards to perform required maintenance. Remove guards only when necessary and replace them when the maintenance requiring their removal is complete. Always use the greatest care when working near moving parts.

1.f. Do not put your hands near the engine fan. Do not attempt to override the governor or idler by pushing on the throttle control rods while the engine is running.

1.g. To prevent accidentally starting gasoline engines while turning the engine or welding generator during maintenance work, disconnect the spark plug wires, distributor cap or magneto wire as appropriate.

1.h. To avoid scalding, do not remove the radiator pressure cap when the engine is hot.

ELECTRIC AND MAGNETIC FIELDS MAY BE DANGEROUS

2.a. Electric current flowing through any conductor causes localized Electric and Magnetic Fields (EMF). Welding current creates EMF fields around welding cables and welding machines

2.b. EMF fields may interfere with some pacemakers, and welders having a pacemaker should consult their physician before welding.

2.c. Exposure to EMF fields in welding may have other health effects which are now not known.

2.d. All welders should use the following procedures in order to minimize exposure to EMF fields from the welding circuit:

2.d.1. Route the electrode and work cables together - Secure them with tape when possible.

2.d.2. Never coil the electrode lead around your body.

2.d.3. Do not place your body between the electrode and work cables. If the electrode cable is on your right side, the work cable should also be on your right side.

2.d.4. Connect the work cable to the workpiece as close as possible to the area being welded.

2.d.5. Do not work next to welding power source.

ELECTRIC SHOCK CAN KILL.

3.a. The electrode and work (or ground) circuits are electrically “hot” when the welder is on. Do not touch these “hot” parts with your bare skin or wet clothing. Wear dry, hole-free gloves to insulate hands.

3.b. Insulate yourself from work and ground using dry insulation. Make certain the insulation is large enough to cover your full area of physical contact with work and ground.

In addition to the normal safety precautions, if welding must be performed under electrically hazardous conditions (in damp locations or while wearing wet clothing; on metal structures such as floors, gratings or scaffolds; when in cramped positions such as sitting, kneeling or lying, if there is a high risk of unavoidable or accidental contact with the workpiece or ground) use the following equipment:

- Semiautomatic DC Constant Voltage (Wire) Welder.
- DC Manual (Stick) Welder.
- AC Welder with Reduced Voltage Control.

3.c. In semiautomatic or automatic wire welding, the electrode, electrode reel, welding head, nozzle or semiautomatic welding gun are also electrically “hot”.

3.d. Always be sure the work cable makes a good electrical connection with the metal being welded. The connection should be as close as possible to the area being welded.

3.e. Ground the work or metal to be welded to a good electrical (earth) ground.

3.f. Maintain the electrode holder, work clamp, welding cable and welding machine in good, safe operating condition. Replace damaged insulation.

3.g. Never dip the electrode in water for cooling.

3.h. Never simultaneously touch electrically “hot” parts of electrode holders connected to two welders because voltage between the two can be the total of the open circuit voltage of both welders.

3.i. When working above floor level, use a safety belt to protect yourself from a fall should you get a shock.

3.j. Also see Items 6.c. and 8.

ARC RAYS CAN BURN.

4.a. Use a shield with the proper filter and cover plates to protect your eyes from sparks and the rays of the arc when welding or observing open arc welding. Headshield and filter lens should conform to ANSI Z87. I standards.

4.b. Use suitable clothing made from durable flame-resistant material to protect your skin and that of your helpers from the arc rays.

4.c. Protect other nearby personnel with suitable, non-flammable screening and/or warn them not to watch the arc nor expose themselves to the arc rays or to hot spatter or metal.

FUMES AND GASES CAN BE DANGEROUS.

5.a. Welding may produce fumes and gases hazardous to health. Avoid breathing these fumes and gases. When welding, keep your head out of the fume. Use enough ventilation and/or exhaust at the arc to keep fumes and gases away from the breathing zone. **When welding hardfacing (see instructions on container or SDS) or on lead or cadmium plated steel and other metals or coatings which produce highly toxic fumes, keep exposure as low as possible and within applicable OSHA PEL and ACGIH TLV limits using local exhaust or mechanical ventilation unless exposure assessments indicate otherwise. In confined spaces or in some circumstances, outdoors, a respirator may also be required. Additional precautions are also required when welding on galvanized steel.**

5. b. The operation of welding fume control equipment is affected by various factors including proper use and positioning of the equipment, maintenance of the equipment and the specific welding procedure and application involved. Worker exposure level should be checked upon installation and periodically thereafter to be certain it is within applicable OSHA PEL and ACGIH TLV limits.

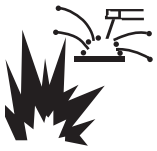
5.c. Do not weld in locations near chlorinated hydrocarbon vapors coming from degreasing, cleaning or spraying operations. The heat and rays of the arc can react with solvent vapors to form phosgene, a highly toxic gas, and other irritating products.

5.d. Shielding gases used for arc welding can displace air and cause injury or death. Always use enough ventilation, especially in confined areas, to insure breathing air is safe.

5.e. Read and understand the manufacturer’s instructions for this equipment and the consumables to be used, including the Safety Data Sheet (SDS) and follow your employer’s safety practices. SDS forms are available from your welding distributor or from the manufacturer.

5.f. Also see item 1.b.

WELDING AND CUTTING SPARKS CAN CAUSE FIRE OR EXPLOSION.



6.a. Remove fire hazards from the welding area. If this is not possible, cover them to prevent the welding sparks from starting a fire. Remember that welding sparks and hot materials from welding can easily go through small cracks and openings to adjacent areas. Avoid welding near hydraulic lines. Have a fire extinguisher readily available.

6.b. Where compressed gases are to be used at the job site, special precautions should be used to prevent hazardous situations. Refer to "Safety in Welding and Cutting" (ANSI Standard Z49.1) and the operating information for the equipment being used.

6.c. When not welding, make certain no part of the electrode circuit is touching the work or ground. Accidental contact can cause overheating and create a fire hazard.

6.d. Do not heat, cut or weld tanks, drums or containers until the proper steps have been taken to insure that such procedures will not cause flammable or toxic vapors from substances inside. They can cause an explosion even though they have been "cleaned". For information, purchase "Recommended Safe Practices for the Preparation for Welding and Cutting of Containers and Piping That Have Held Hazardous Substances", AWS F4.1 from the American Welding Society (see address above).

6.e. Vent hollow castings or containers before heating, cutting or welding. They may explode.

6.f. Sparks and spatter are thrown from the welding arc. Wear oil free protective garments such as leather gloves, heavy shirt, cuffless trousers, high shoes and a cap over your hair. Wear ear plugs when welding out of position or in confined places. Always wear safety glasses with side shields when in a welding area.

6.g. Connect the work cable to the work as close to the welding area as practical. Work cables connected to the building framework or other locations away from the welding area increase the possibility of the welding current passing through lifting chains, crane cables or other alternate circuits. This can create fire hazards or overheat lifting chains or cables until they fail.

6.h. Also see item 1.c.

6.I. Read and follow NFPA 51B "Standard for Fire Prevention During Welding, Cutting and Other Hot Work", available from NFPA, 1 Batterymarch Park, PO box 9101, Quincy, MA 022690-9101.

6.j. Do not use a welding power source for pipe thawing.

CYLINDER MAY EXPLODE IF DAMAGED.

7.a. Use only compressed gas cylinders containing the correct shielding gas for the process used and properly operating regulators designed for the gas and pressure used. All hoses, fittings, etc. should be suitable for the application and maintained in good condition.

7.b. Always keep cylinders in an upright position securely chained to an undercarriage or fixed support.

7.c. Cylinders should be located:

- Away from areas where they may be struck or subjected to physical damage.
- A safe distance from arc welding or cutting operations and any other source of heat, sparks, or flame.

7.d. Never allow the electrode, electrode holder or any other electrically "hot" parts to touch a cylinder.

7.e. Keep your head and face away from the cylinder valve outlet when opening the cylinder valve.

7.f. Valve protection caps should always be in place and hand tight except when the cylinder is in use or connected for use.

7.g. Read and follow the instructions on compressed gas cylinders, associated equipment, and CGA publication P-I, "Precautions for Safe Handling of Compressed Gases in Cylinders," available from the Compressed Gas Association, 14501 George Carter Way Chantilly, VA 20151.

FOR ELECTRICALLY POWERED EQUIPMENT.

8.a. Turn off input power using the disconnect switch at the fuse box before working on the equipment.

8.b. Install equipment in accordance with the U.S. National Electrical Code, all local codes and the manufacturer's recommendations.

8.c. Ground the equipment in accordance with the U.S. National Electrical Code and the manufacturer's recommendations.

Refer to http://www.lincolnelectric.com/safety for additional safety information.

As a rule of thumb, for many mild steel electrode, if the air is visibly clear and you are comfortable, then the ventilation is generally adequate for your work. The most accurate way to determine if the worker exposure does not exceed the applicable exposure limit for compounds in the fumes and gases is to have an industrial hygienist take and analyze a sample of the air you are breathing. This is particularly important if you are welding with stainless, hardfacing or Special Ventilation products. All Lincoln MSDS have a maximum fume guideline number. If exposure to total fume is kept below that number, exposure to all fume from the electrode (not coatings or plating on the work) will be below the TLV.

There are steps that you can take to identify hazardous substances in your welding environment. Read the product label and material safety data sheet for the electrode posted in the work place or in the electrode or flux container to see what fumes can be reasonably expected from use of the product and to determine if special ventilation is needed. Secondly, know what the base metal is and determine if there is any paint, plating, or coating that could expose you to toxic fumes and/or gases. Remove it from the metal being welded, if possible. If you start to feel uncomfortable, dizzy or nauseous, there is a possibility that you are being overexposed to fumes and gases, or suffering from oxygen deficiency. Stop welding and get some fresh air immediately. Notify your supervisor and co-workers so the situation can be corrected and other workers can avoid the hazard. Be sure you are following these safe practices, the consumable labeling and MSDS to improve the ventilation in your area. Do not continue welding until the situation has been corrected.

NOTE: The MSDS for all Lincoln consumables is available on Lincoln's web-site: www.lincolnelectric.com

Before we turn to the methods available to control welding fume exposure, you should understand a few basic terms:

Natural Ventilation is the movement of air through the workplace caused by natural forces. Outside, this is usually the wind. Inside, this may be the flow of air through open windows and doors.

Mechanical Ventilation is the movement of air through the workplace caused by an electrical device such as a portable fan or permanently mounted fan in the ceiling or wall.

Source Extraction (Local Exhaust) is a mechanical device used to capture welding fume at or near the arc and filter contaminants out of the air.

The ventilation or exhaust needed for your application depends upon many factors such as:

- Workspace volume
- Workspace configuration
- Number of welders
- Welding process and current
- Consumables used (mild steel, hardfacing, stainless, etc.)
- Allowable levels (TLV, PEL, etc.)
- Material welded (including paint or plating)
- Natural airflow

Your work area has adequate ventilation when there is enough ventilation and/or exhaust to control worker exposure to hazardous materials in the welding fumes and gases so the applicable limits for those materials is not exceeded. See chart of TLV and PEL for Typical Electrode Ingredients, the OSHA PEL (Permissible Exposure Limit), and the recommended guideline, the ACGIH TLV (Threshold Limit Value), for many compounds found in welding fume.

Ventilation

There are many methods which can be selected by the user to provide adequate ventilation for the specific application. The following section provides general information which may be helpful in evaluating what type of ventilation equipment may be suitable for your application. When ventilation equipment is installed, you should confirm worker exposure is controlled within applicable OSHA PEL and/or ACGIH TLV. According to OSHA regulations, when welding and cutting (mild steels), natural ventilation is usually considered sufficient to meet requirements, provided that:

1. The room or welding area contains at least 10,000 cubic feet (about 22' x 22' x 22') for each welder.
2. The ceiling height is not less than 16 feet.
3. Cross ventilation is not blocked by partitions, equipment, or other structural barriers.
4. Welding is not done in a confined space.

Spaces that do not meet these requirements should be equipped with mechanical ventilating equipment that exhausts at least 2000 CFM of air for each welder, except where local exhaust hoods or booths, or air-line respirators are used.

Important Safety Note:

When welding with electrodes which require special ventilation such as stainless or hardfacing (see instructions on container or MSDS) or on lead or cadmium plated steel and other metals or coatings which produce hazardous fumes, keep exposure as low as possible and below exposure limit values (PEL and TLV) for materials in the fume using local exhaust or mechanical ventilation. In conned spaces or in some circumstances, for example outdoors, a respirator may be required if exposure cannot be controlled to the PEL or TLV. (See MSDS and chart of TLV and PEL for Typical Electrode Ingredients.) Additional precautions are also required when welding on galvanized steel.

BIBLIOGRAPHY AND SUGGESTED READING

ANSI Z87.1, Practice for Occupational and Educational Eye and Face Protection, American National Standards Institute, 11 West 42nd Street, New York, NY 10036.

Arc Welding and Your Health: A Handbook of Health Information for Welding. Published by The American Industrial Hygiene Association, 2700 Prosperity Avenue, Suite 250, Fairfax, VA 22031-4319.

NFPA Standard 51B, Cutting and Welding Processes, National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9146, Quincy, MA 02269-9959.

OSHA General Industry Standard 29 CFR 1910 Subpart Q. OSHA Hazard Communication Standard 29 CFR 1910.1200. Available from the Occupational Safety and Health Administration at http://www.osha.org or contact your local OSHA office.

The following publications are published by The American Welding Society, P.O. Box 351040, Miami, Florida 33135. AWS publications may be purchased from the American Welding society at http://www.aws.org or by contacting the AWS at 800-443-9353.

ANSI, Standard Z49.1, Safety in Welding, Cutting and Allied Processes. Z49.1 is now available for download at no charge at http://www.lincolnelectric.com/community/safety/ or at the AWS website http://www.aws.org.

AWS F1.1, Method for Sampling Airborne Particulates Generated by Welding and Allied Processes.

AWS F1.2, Laboratory Method for Measuring Fume Generation Rates and Total Fume Emission of Welding and Allied Processes.

AWS F1.3, Evaluating Contaminants in the Welding Environment: A Strategic Sampling Guide.

AWS F1.5, Methods for Sampling and Analyzing Gases from Welding and Allied Processes.

AWS F3.2, Ventilation Guide for Welding Fume Control

AWS F4.1, Recommended Safe Practices for the Preparation for Welding and Cutting of Containers and Piping That Have Held Hazardous Substances.

AWS SHF, Safety and Health Facts Sheets. Available free of charge from the AWS website at http://www.aws.org.

LISTED BELOW ARE SOME TYPICAL INGREDIENTS IN WELDING ELECTRODES AND THEIR TLV (ACGIH) GUIDELINES AND PEL (OSHA) EXPOSURE LIMITS

INGREDIENTS	CAS No.	TLV mg/m³	PEL mg/m³
Aluminum and/or aluminum alloys (as Al)*****	7429-90-5	1.0	15
Aluminum oxide and/or Bauxite*****	1344-28-1	1.0	5**
Barium compounds (as Ba)*****	513-77-9	0.5	0.5
Chromium and chromium alloys or compounds (as Cr)*****	7440-47-3	0.5(b)	0.5(b)
Hexavalent Chromium (Cr VI)	18540-29-9	0.05(b)	.005(b)
Copper Fume	7440-50-8	0.2	0.1
Cobalt Compounds	7440-48-4	0.02	0.1
Fluorides (as F)	7789-75-5	2.5	2.5
Iron	7439-89-6	10*	10*
Limestone and/or calcium carbonate	1317-65-3	10*	15
Lithium compounds (as Li)	554-13-2	15	10*
Magnesite	1309-48-4	10	15
Magnesium and/or magnesium alloys and compounds (as Mg)	7439-95-4	10*	10*
Manganese and/or manganese alloys and compounds (as Mn)*****	7439-96-5	0.02	5.0(c)
Mineral silicates	1332-58-7	5**	5**
Molybdenum alloys (as Mo)	7439-98-7	10	10
Nickel*****	7440-02-0	0.1	1
Silicates and other binders	1344-09-8	10*	10*
Silicon and/or silicon alloys and compounds (as Si)	7440-21-3	10*	10*
Strontium compounds (as Sr)	1633-05-2	10*	10*
Zirconium alloys and compounds (as Zr)	12004-83-0	5	5

Supplemental Information:

(*) Not listed. Nuisance value maximum is 10 milligrams per cubic meter. PEL value for iron oxide is 10 milligrams per cubic meter. TLV value for iron oxide is 5 milligrams per cubic meter.

(**) As respirable dust.

(*****) Subject to the reporting requirements of Sections 311, 312, and 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40CFR 370 and 372.

(b) The PEL for chromium (VI) is .005 milligrams per cubic meter as an 8 hour time weighted average. The TLV for water-soluble chromium (VI) is 0.05 milligrams per cubic meter. The TLV for insoluble chromium (VI) is 0.01 milligrams per cubic meter.

(c) Values are for manganese fume. STEL (Short Term Exposure Limit) is 3.0 milligrams per cubic meter. OSHA PEL is a ceiling value.

(****) The TLV for soluble barium compounds is 0.5 mg/m³.

TLV and PEL values are as of October 2013. Always check Safety Data Sheet (SDS) with product or on the Lincoln Electric website at http://www.lincolnelectric.com

Content/details may be changed or updated without notice. For most current Instruction Manuals, go to parts.lincolnelectric.com.

TECHNICAL SPECIFICATIONS

MODULAR FUME HOOD

HOOD SIZE	
MINIMUM HOOD SIZE	3.5 X 5 FT (1 X 1.5 M)
MAXIMUM HOOD SIZE	18 X 18 FT (5.5 X 5.5 M)

RECOMMENDED EXTRACTION CAPACITY
27 - 44 CFM per ft^2 (500 - 800 m^3/h per m^2) of hood

PRESSURE LOSS OVER HOOD
Max. 1 in. WG (250 Pa)

Check the available Product Data Sheets for extensive product specifications.

GENERAL DESCRIPTION

The Modular Fume Hood is a reliable and practical solution to contain and extract welding, cutting, arc gouging and grinding fume from the work environment. It is designed to connect to an external extraction/filtration system. The hood can be hung from the ceiling or mounted on legs.

This manual describes the following types of hoods:

	Min. Size	Max. Size
Modular Fume Hood: - Single Compartment	3.5 X 5 FT (1.0 X 1.5 M)	6.5 X 18 FT (2.0 X 5.5 M)
Modular Fume hood XL: - Double compartment - Triple compartment	8 X 8 FT (2.5 X 2.5 M) 8 X 15 FT (2.5 X 4.5 M)	13 X 18 FT (4.0 X 5.5M) 18 X 18 FT (5.5 X 5.5 M)

This chapter describes the installation of single, double and triple compartment modular fume hoods.

- Single compartment modular fume hoods consist of one row of roof panels.
- Double compartment modular fume hoods consist of two rows of roof panels with two cross-mounted main frame profiles in between.
- Triple compartment modular fume hoods consist of three rows of roof panels with four cross-mounted main frame profiles in between.

The cross-profiles are connected to the main frame profiles by T-brackets.

COMPONENTS

The Modular Fume hood consists of the following main components (See Figure A.1):

A. Connection flange set(s)

B. Top roof panels

C. Main frame profiles

D. Bottom roof panels

E. Corner piece sets

F. Corner covers

G. H-profiles

Additionally for Modular Fume Hood XL:

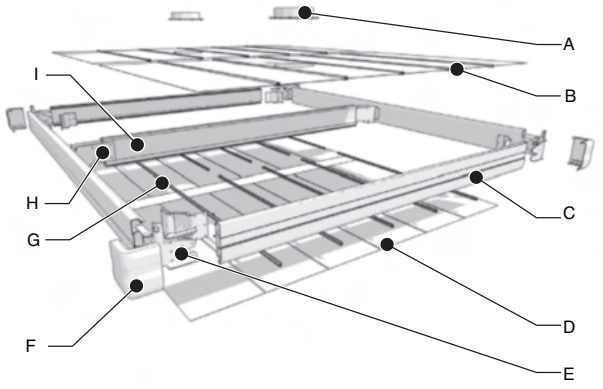
H. T-brackets

I. Main frame profiles used as cross-profiles

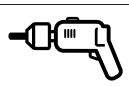
If parts are missing or damaged, contact your supplier.

Remove protection foil from roof panels.

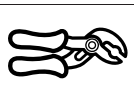
FIGURE – A.1



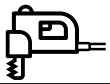
TOOLS



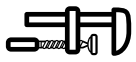
Electric drill
- socket 7 mm
- socket 10 mm



Pair of pliers to fasten vertical spacers

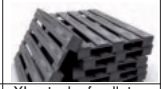


Jigsaw to make cut-outs in roof panels



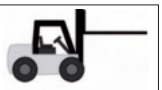
Glueing clamp for mounting of legs

XL: cargo lashing (option)



XL: stack of pallets (option)

Razor knife for cutting welding strips



Fork-lift truck(s) with long forks for mounting of hood

UNPACKING

Check that the product is complete. The Modular Fume hood is built up of the following components/sets:

- 4 main frame profiles
- 2 corner sets
- 1 corner cover set
- 1 roof panel set (basic)
- Roof panel set(s) (extension) - for hood/compartment lengths > 3.5 ft (1.5 m)
- 1 or 2 connection flanges
- 1 branding set

Welding strips + strip bracket set(s) - Lincoln Electric supplies as standard

Additionally for Modular Fume Hoods XL:

- 2 or 4 main frame profiles to be used as cross profiles
- T-brackets
- 3 to 6 connection flange(s)

Optionally available:

- Legs + floor mounting set
- Corner reinforcement (for leg-mounted modular fume hoods XL)
- Lighting fixture

NOTE: The best way to assemble a Modular Fume Hood XL is to place a stack of pallets under each corner of the hood and one or two additional stacks under the loose ends of the cross-profiles.

NOTE: It is strongly recommended to lift a Modular Fume Hood XL using two fork-lift trucks. Make sure to lift the hood by the profiles, not by the roof panels.

In case a standing hood XL is to be positioned in a corner:

- Position the hood roughly using two fork-lift trucks.
- Put some pallets on the forks of one fork-lift truck.

If necessary, use additional beams.

- Lift the hood in the middle and place it on the final position.

MOUNTING POSSIBILITIES

- Standard: hanging by chains (chain links min. 0.3 in./8 mm; to be sourced locally)

- Option: standing on legs + floor mounting set

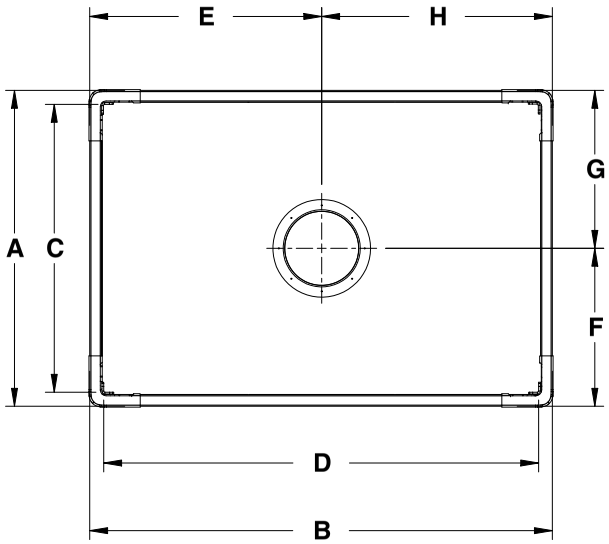
- A combination of both (e.g. 2 chains + 2 legs)

For a hanging mounted configuration, check that the roof is strong enough. Weights of Modular Fume Hoods are listed in the S31225-77 tables published on the following pages.

Refer Assembly Reference Section of the manual for detailed information.

⚠ CAUTION

Use proper material to mount the chains. If necessary: consult the architect of the building.



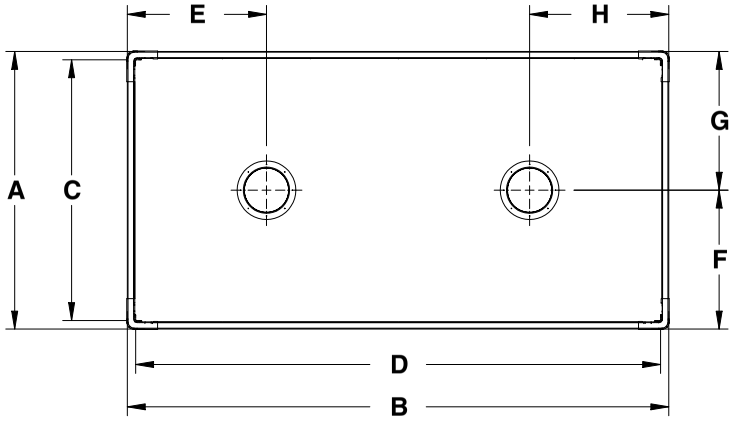
SINGLE FLANGE

SINGLE COMPARTMENTS

TOP LEVEL NUMBER	ARTICLE NUMBER	NO. OF FLANGES	DESCRIPTION	A	B	C	D	E	F	G	H	~ WEIGHT (Kg)	~ WEIGHT (lbs)
AD1234-80	S28058-30	1	FUME HOOD, MODULAR 1m x 1.5m KIT	42.40	62.10	38.60	58.30	31.05	21.20	21.20	31.05	70	155
AD1234-81	S28058-31	1	FUME HOOD, MODULAR 1m x 2m KIT	42.40	81.78	38.60	77.98	31.05	21.20	21.20	50.73	80	177
AD1234-82	S28058-32	1	FUME HOOD, MODULAR 1m x 2.5m KIT	42.40	101.46	38.60	97.66	50.73	21.20	21.20	50.73	92	204
AD1234-83	S28058-33	2	FUME HOOD, MODULAR 1m x 3m KIT	42.40	121.14	38.60	117.34	31.05	21.20	21.20	31.05	104	230
AD1234-84	S28058-34	2	FUME HOOD, MODULAR 1m x 3.5m KIT	42.40	140.82	38.60	137.02	31.05	21.20	21.20	31.05	115	254
AD1234-85	S28058-35	2	FUME HOOD, MODULAR 1m x 4m KIT	42.40	160.50	38.60	156.70	50.73	21.20	21.20	50.73	126	278
AD1234-98	S28058-80	2	FUME HOOD, MODULAR 1m x 4.5m KIT	42.40	180.18	38.60	176.38	50.73	21.20	21.20	50.73	137	303
AD1234-99	S28058-81	2	FUME HOOD, MODULAR 1M x 5M KIT	42.40	199.86	38.60	196.06	50.73	21.20	21.20	50.73	148	326
AD1234-100	S28058-82	2	FUME HOOD, MODULAR 1m x 5.5m KIT	42.40	219.54	38.60	215.74	70.41	21.20	21.20	70.41	159	350
AD1234-86	S28058-36	1	FUME HOOD, MODULAR 1.5m x 1.5m KIT	62.10	62.10	58.30	58.30	31.05	31.05	31.05	31.05	82	182
AD1234-87	S28058-37	1	FUME HOOD, MODULAR 1.5m x 2.5m KIT	62.10	101.46	58.30	97.66	50.73	31.05	31.05	50.73	111	244
AD1234-88	S28058-38	2	FUME HOOD, MODULAR 1.5m x 3m KIT	62.10	121.14	58.30	117.34	31.05	31.05	31.05	31.05	125	276
AD1234-89	S28058-39	2	FUME HOOD, MODULAR 1.5m x 3.5m KIT	62.10	140.82	58.30	137.02	31.05	31.05	31.05	31.05	139	306
AD1234-90	S28058-40	2	FUME HOOD, MODULAR 1.5m x 4m KIT	62.10	160.50	58.30	156.70	50.73	31.05	31.05	50.73	153	337
AD1234-101	S28058-83	2	FUME HOOD, MODULAR 1.5m x 4.5m KIT	62.10	180.18	58.30	176.38	50.73	31.05	31.05	50.73	167	369
AD1234-102	S28058-84	2	FUME HOOD, MODULAR 1.5m x 5m KIT	62.10	199.86	58.30	196.06	50.73	31.05	31.05	50.73	180	398
AD1234-103	S28058-85	2	FUME HOOD, MODULAR 1.5m x 5.5m KIT	62.10	219.54	58.30	215.74	70.41	31.05	31.05	70.41	194	429
AD1234-91	S28058-41	1	FUME HOOD, MODULAR 2m x 1.5m KIT	81.78	62.10	77.98	58.30	31.05	40.89	40.89	31.05	94	208
AD1234-92	S28058-42	1	FUME HOOD, MODULAR 2m x 2m KIT	81.78	81.78	77.98	77.98	31.05	40.89	40.89	50.73	109	241
AD1234-93	S28058-43	1	FUME HOOD, MODULAR 2m x 2.5m KIT	81.78	101.46	77.98	97.66	50.73	40.89	40.89	50.73	127	281
AD1234-94	S28058-44	2	FUME HOOD, MODULAR 2m x 3m KIT	81.78	121.14	77.98	117.34	31.05	40.89	40.89	31.05	145	320
AD1234-95	S28058-45	2	FUME HOOD, MODULAR 2m x 3.5m KIT	81.78	140.82	77.98	137.02	31.05	40.89	40.89	31.05	161	356
AD1234-96	S28058-46	2	FUME HOOD, MODULAR 2m x 4m KIT	81.78	160.50	77.98	156.70	50.73	40.89	40.89	50.73	178	392
AD1234-104	S28058-86	2	FUME HOOD, MODULAR 2m x 4.5m KIT	81.78	180.18	77.98	176.38	50.73	40.89	40.89	50.73	195	430
AD1234-105	S28058-87	2	FUME HOOD, MODULAR 2m x 5m KIT	81.78	199.86	77.98	196.06	50.73	40.89	40.89	50.73	211	466
AD1234-106	S28058-88	2	FUME HOOD, MODULAR 2m x 5.5m KIT	81.78	219.54	77.98	215.74	70.41	40.89	40.89	70.41	227	502

ALL DIMENSIONS ARE IN INCHES

REFER DIAGRAMS BASED ON THE NO. OF FLANGES AND ASSEMBLY PART NUMBER IN THE TABLE



TWO FLANGES

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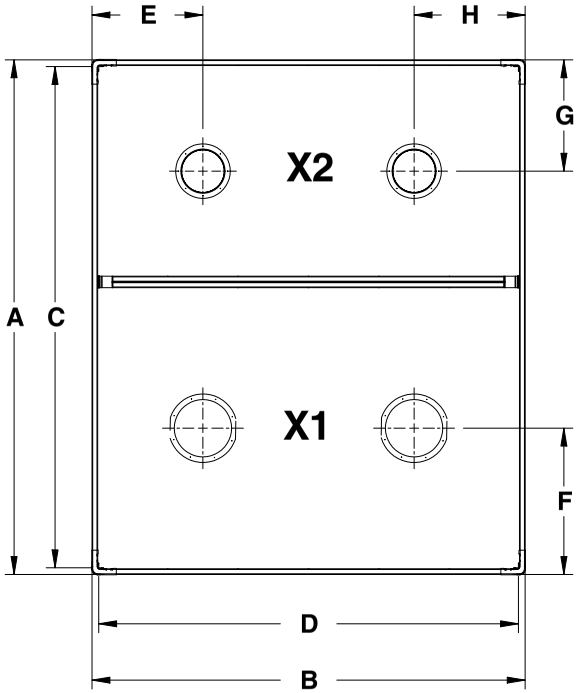
NB. WEIGHTS IN THE TABLE ARE APPROXIMATE AND INDICATIVE.

NC. C AND D ARE HANGING DIMENSIONS.

FOUR FLANGES



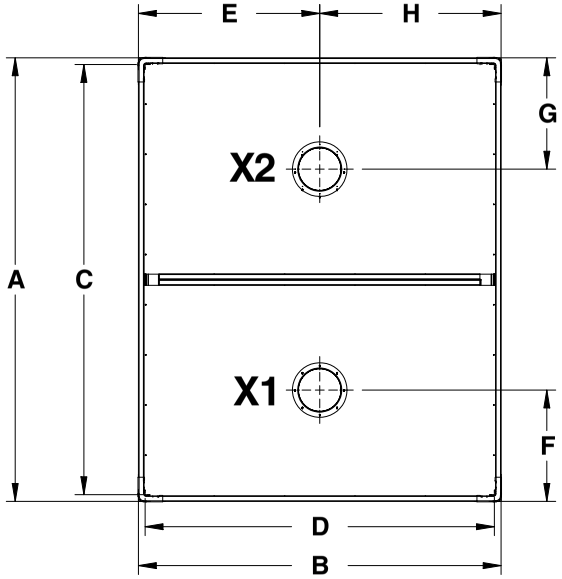
DOUBLE COMPARTMENTS

TOP LEVEL NUMBER	ARTICLE NUMBER	NO. OF FLANGES	DESCRIPTION	A	B	C	D	E	F	G	H	~ WEIGHT (Kg)	~ WEIGHT (lbs)
AD1234-107	S28058-89	2	FUME HOOD, MODULAR 2.5m x 2.5m KIT	104.49	101.46	100.69	97.66	50.73	31.05	21.20	50.73	162	357
AD1234-108	S28058-90	2	FUME HOOD, MODULAR 3m x 2.5m KIT	124.17	101.46	120.37	97.66	50.73	31.05	31.05	50.73	183	405
AD1234-109	S28058-91	4	FUME HOOD, MODULAR 3m x 3m KIT	124.17	121.14	120.37	117.34	31.05	31.05	31.05	31.05	209	462
AD1234-110	S28058-92	4	FUME HOOD, MODULAR 3m x 4.5m KIT	124.17	180.18	120.37	176.38	50.73	31.05	31.05	50.73	295	651
AD1234-111	S28058-93	2	FUME HOOD, MODULAR 3.5m x 2.5m KIT	143.86	101.46	140.06	97.66	50.73	40.89	31.05	50.73	201	444
AD1234-112	S28058-94	4	FUME HOOD, MODULAR 3.5m x 3m KIT	143.86	121.14	140.06	117.34	31.05	40.89	31.05	31.05	230	508
AD1234-113	S28058-95	4	FUME HOOD, MODULAR 3.5m x 3.5m KIT	143.86	140.82	140.06	137.02	31.05	40.89	31.05	31.05	264	582
AD1234-114	S28058-96	4	FUME HOOD, MODULAR 3.5m x 4.5m KIT	143.86	180.18	140.06	176.38	50.73	40.89	31.05	50.73	324	715
AD1234-115	S28058-97	4	FUME HOOD, MODULAR 3.5m x 5m KIT	143.86	199.86	140.06	196.06	50.73	40.89	31.05	50.73	354	781
AD1234-116	S28058-98	2	FUME HOOD, MODULAR 4m x 2.5m KIT	163.54	101.46	159.74	97.66	50.73	40.89	40.89	50.73	219	483
AD1234-117	S28058-99	4	FUME HOOD, MODULAR 4m x 3m KIT	163.54	121.14	159.74	117.34	31.05	40.89	40.89	31.05	251	554
AD1234-118	S28058-100	4	FUME HOOD, MODULAR 4m x 3.5m KIT	163.54	140.82	159.74	137.02	31.05	40.89	40.89	31.05	287	634
AD1234-119	S28058-101	4	FUME HOOD, MODULAR 4m x 4m KIT	163.54	160.50	159.74	156.70	50.73	40.89	40.89	50.73	320	706
AD1234-120	S28058-102	4	FUME HOOD, MODULAR 4m x 4.5m KIT	163.54	180.18	159.74	176.38	50.73	40.89	40.89	50.73	352	778
AD1234-121	S28058-103	4	FUME HOOD, MODULAR 4m x 5m KIT	163.54	199.86	159.74	196.06	50.73	40.89	40.89	50.73	385	850
AD1234-122	S28058-104	4	FUME HOOD, MODULAR 4m x 5.5m KIT	163.54	219.54	159.74	215.74	70.41	40.89	40.89	70.41	418	922

ALL DIMENSIONS ARE IN INCHES

REFER DIAGRAMS BASED ON THE NO. OF FLANGES AND ASSEMBLY PART NUMBER IN THE TABLE

POSITION OF COMPARTMENT		
A (Inch)	X1 (Meter)	X2 (Meter)
104.49	1.5	1
124.17	1.5	1.5
143.86	2	1.5
163.54	2	2



TWO FLANGES

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NB. WEIGHTS IN THE TABLE ARE APPROXIMATE AND INDICATIVE.

NC. COMPARTMENT ARRANGEMENT (X1 & X2) CAN BE VARIED DEPENDING ON THE REQUIREMENT OF CUSTOMER.

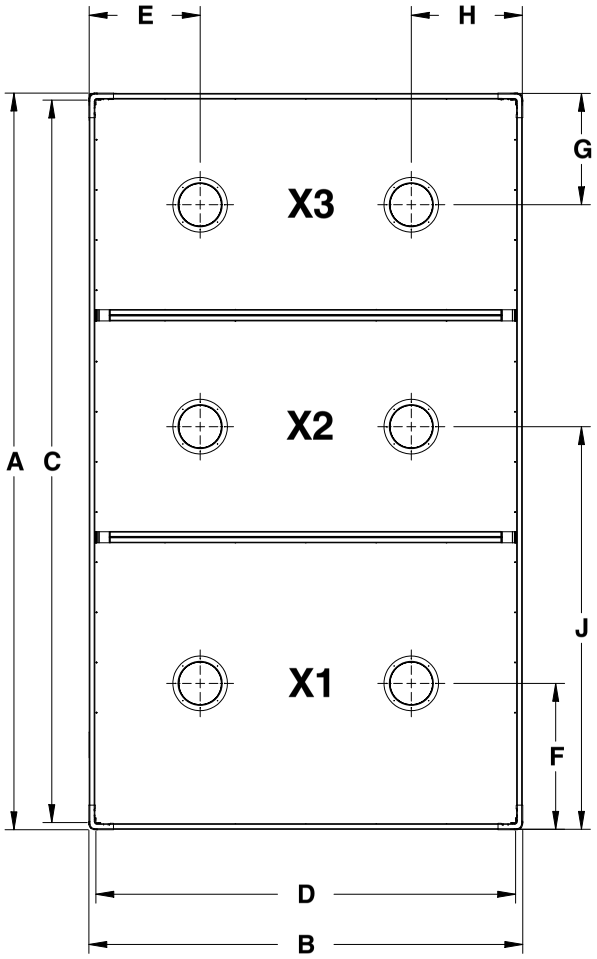
ND. C AND D ARE HANGING DIMENSIONS.

TRIPLE COMPARTMENTS

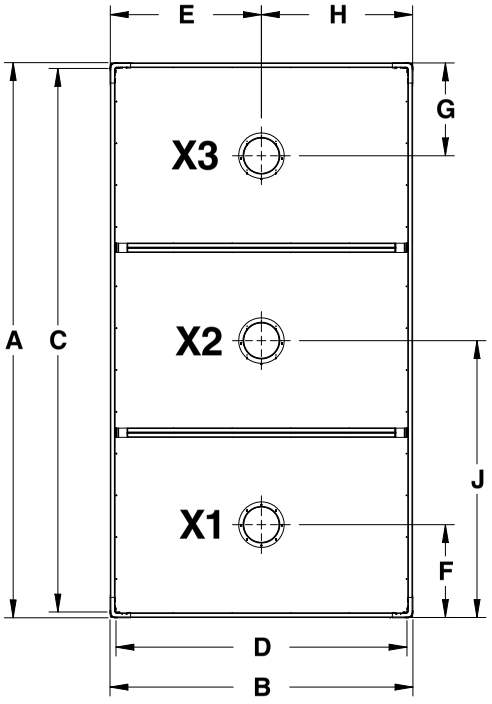
TOP LEVEL NUMBER	ARTICLE NUMBER	NO. OF FLANGES	DESCRIPTION	A	B	C	D	E	F	G	H	J	~WEIGHT (Kg)	~WEIGHT (lbs)
AD1234-123	S28058-105	3	FUME HOOD, MODULAR 4.5m x 2.5m KIT	186.26	101.46	182.46	97.66	50.73	31.05	31.05	50.73	93.13	268	591
AD1234-124	S28058-106	6	FUME HOOD, MODULAR 4.5m x 4.5m KIT	186.26	180.18	182.46	176.38	50.73	31.05	31.05	50.73	93.13	437	965
AD1234-125	S28058-107	3	FUME HOOD, MODULAR 5m x 2.5m KIT	205.94	101.46	202.14	97.66	50.73	40.89	31.05	50.73	112.83	285	630
AD1234-126	S28058-108	6	FUME HOOD, MODULAR 5m x 3m KIT	205.94	121.14	202.14	117.34	31.05	40.89	31.05	31.05	112.83	333	734
AD1234-127	S28058-109	6	FUME HOOD, MODULAR 5m x 4.5m KIT	205.94	180.18	202.14	176.38	50.73	40.89	31.05	50.73	112.83	466	1028
AD1234-128	S28058-110	6	FUME HOOD, MODULAR 5m x 5m KIT	205.94	199.86	202.14	196.06	50.73	40.89	31.05	50.73	112.83	509	1123
AD1234-129	S28058-111	3	FUME HOOD, MODULAR 5.5m x 2.5m KIT	225.63	101.46	221.83	97.66	50.73	40.89	31.05	50.73	122.67	303	669
AD1234-130	S28058-112	6	FUME HOOD, MODULAR 5.5m x 3m KIT	225.63	121.14	221.83	117.34	31.05	40.89	31.05	31.05	122.67	353	780
AD1234-131	S28058-113	6	FUME HOOD, MODULAR 5.5m x 3.5m KIT	225.63	140.82	221.83	137.02	31.05	40.89	31.05	31.05	122.67	400	882
AD1234-132	S28058-114	6	FUME HOOD, MODULAR 5.5m x 4.5m KIT	225.63	180.18	221.83	176.38	50.73	40.89	31.05	50.73	122.67	495	1092
AD1234-133	S28058-115	6	FUME HOOD, MODULAR 5.5m x 5m KIT	225.63	199.86	221.83	196.06	50.73	40.89	31.05	50.73	122.67	540	1193
AD1234-134	S28058-116	6	FUME HOOD, MODULAR 5.5m x 5.5m KIT	225.63	219.54	221.83	215.74	70.41	40.89	31.05	70.41	122.67	587	1295

ALL DIMENSIONS ARE IN INCHES

REFER DIAGRAMS BASED ON THE NO. OF FLANGES AND ASSEMBLY PART NUMBER IN THE TABLE



SIX FLANGES



THREE FLANGES

POSITION OF COMPARTMENT			
A (Inch)	X1 (Meter)	X2 (Meter)	X3 (Meter)
186.26	1.5	1.5	1.5
205.94	2	1.5	1.5
225.63	2	2	1.5

NOTES:

NA. ALL DIMENSIONS MENTIONED IN THIS DATA SHEET ARE APPROXIMATE AND INDICATIVE, ACTUAL PHYSICAL ASSEMBLY DIMENSIONS MAY VARY AND SUBJECT TO CHANGE BASED ON MANUFACTURING DRAWINGS.

NB. WEIGHTS IN THE TABLE ARE APPROXIMATE AND INDICATIVE.

NC. COMPARTMENT ARRANGEMENT (X1, X2 & X3) CAN BE VARIED DEPENDING ON THE REQUIREMENT OF CUSTOMER.

ND. C AND D ARE HANGING DIMENSIONS.

Carefully read and follow the instructions before proceeding to make any cut-outs on the panels.

To mount the Modular Fume Hood proceed as follows:

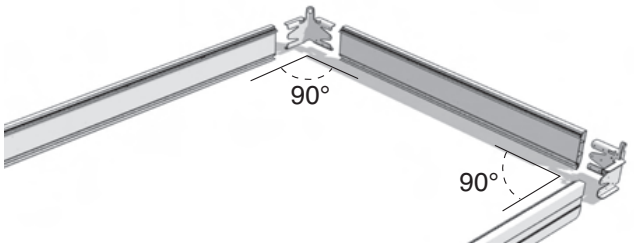
SINGLE COMPARTMENT

⚠ ATTENTION

In case of making a double or triple compartment hood, carefully read through the respective sections before proceeding to the below steps

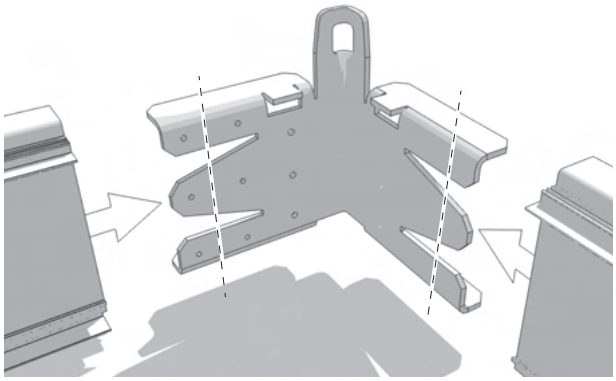
1. Form a U-shape using 3 main frame profiles and 2 outside corner pieces. See Figure A.2.

FIGURE – A.2



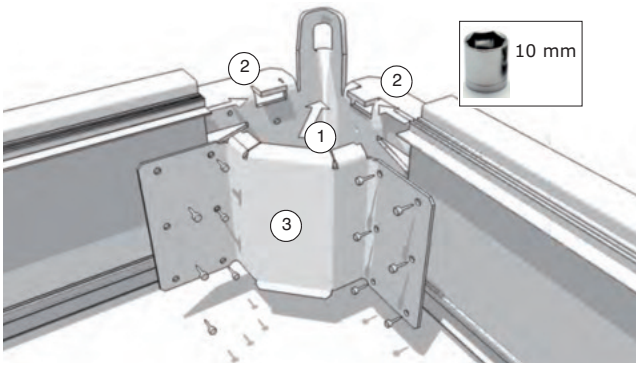
2. Slide the main frame profiles halfway over the outside corner pieces. See Figure A.3.

FIGURE – A.3



3. Place the inside corner pieces (1) and slide in the main frame profiles (2). Fasten the corner piece (3) to the main frame profiles with self-tapping screws. Use inside corner pieces as template. See Figure A.4.

FIGURE – A.4



⚠ ATTENTION

Refer to "A-TOP", "B-BOTTOM" and "C-BOTTOM END" markings on the panels for easy identification and assembly.

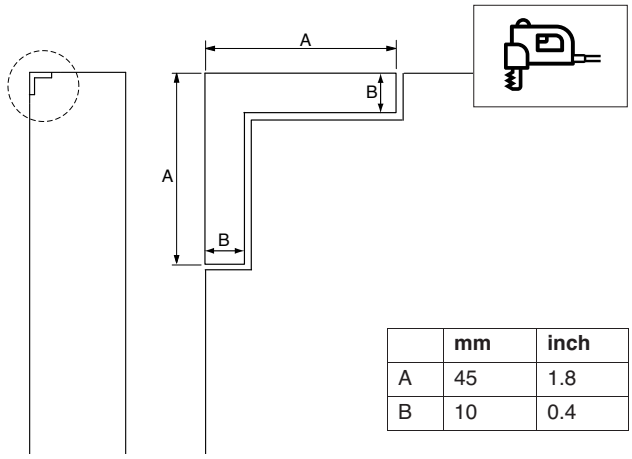
Remove protection foil from roof panels before assembly. Panel identification markings are on the foil and make sure not to remove the foils at one time from all panels, this may lead to difficulties with assembly.

4. Make cutouts in the "A-TOP" roof panels that will be mounted in the corners. See Figure A.5.

⚠ ATTENTION

For double and triple compartment hoods, do not make cut-outs on both corners of the "A-TOP" panel. Review the "A-TOP" panel lay-out and cut only on the required corners. Corner cutting is not required for the "A-TOP" panel assembled adjacent to the T -brackets.

FIGURE – A.5



	mm	inch
A	45	1.8
B	10	0.4

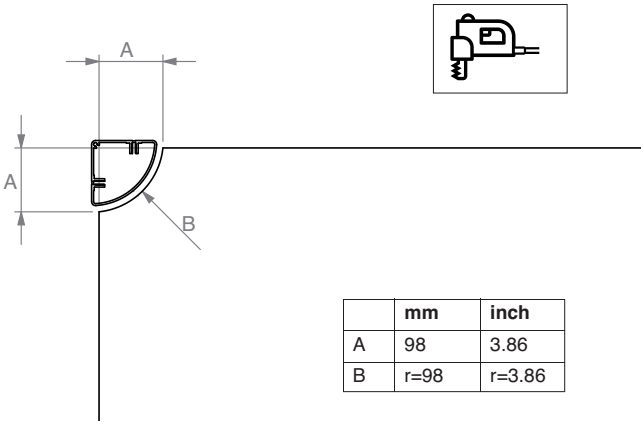
In case of leg mounting:

5. Make cut-aways in two “C-BOTTOM END” roof panels (W = 18.8 in. / 477mm) for mounting of legs. See Figure A.6.

⚠ ATTENTION

For double and triple compartment hoods, do not make cut-outs on both corners of the “C-BOTTOM END” panel. Review the “C-BOTTOM END” panel lay-out and cut only on the required corners. Corner cutting is not required for the “C-BOTTOM END” panel assembled adjacent to the T-brackets.

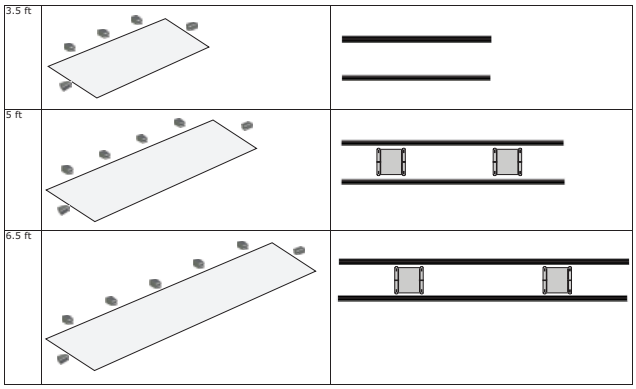
FIGURE – A.6



	mm	inch
A	98	3.86
B	r=98	r=3.86

6. Apply distance holders (1) to “C-BOTTOM END” roof panel (W = 18.8 in.477 mm) according to Table A.7.

TABLE – A.7

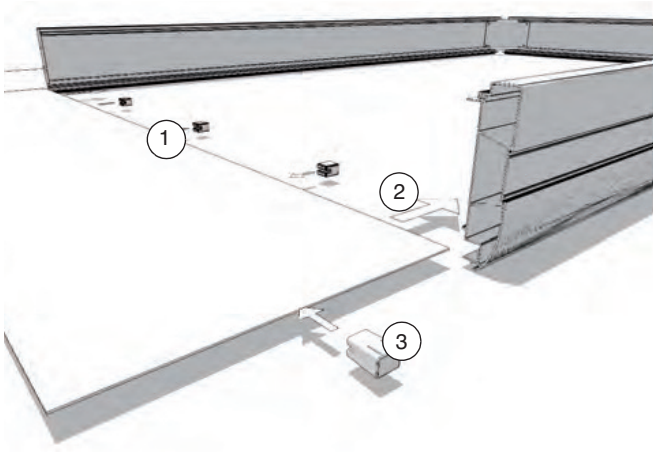


7. Slide “C-BOTTOM END” roof panel in main frame profile (2). See Figure A.8.

   Note: In case of leg mounting, make sure to use / cut the “C-BOTTOM END” panel as per figure A.6

8 . Apply distance holders to the sides of the “C-BOTTOM END” roof panel(3). See Figure A.8.

FIGURE – A.8



9. Place a long H-profile.
10. Place “A-TOP” roof panel.

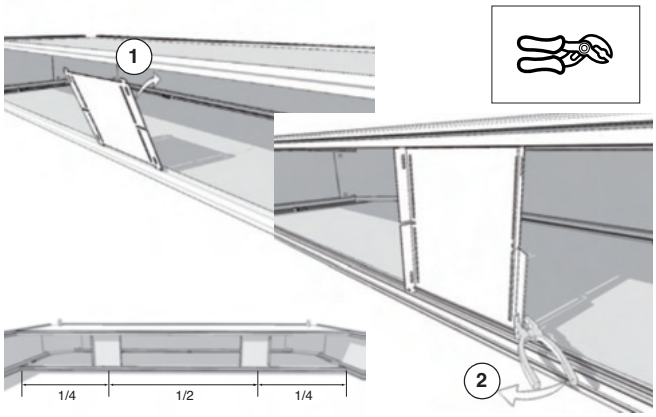
    Note: Use the “A-TOP” panel which has corners cut as per Figure A.5

11. Place a short H-profile.

Hood/compartment width 5 or 6.5 ft (1.5 or 2 m):

12. Place 2 vertical spacers between the H-profiles (1). See Figure A.9 and Table A.7
13. Fasten them using a pair of pliers (2). See Figure A.9.

FIGURE – A.9

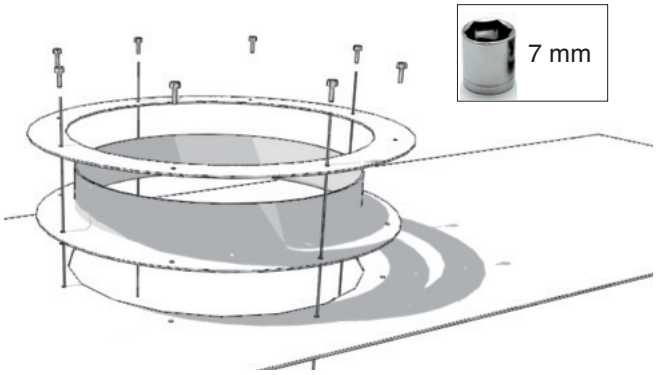


14. Determine position and number of connection flanges according to S31225-77 Table. Refer the assembly references section of the manual.

15. Make necessary cutout(s) in “A-TOP” roof panel(s), using the inner flange ring as a template.

16. Mount connection flange(s). See Figure A.10.

FIGURE – A.10

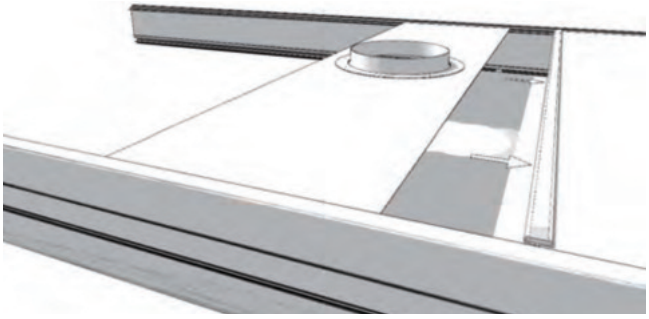


17. Continue to place the “B-BOTTOM” roof panels with side distance holders, “A-TOP” roof panels, H-profiles and vertical spacers (if applicable) and “C-BOTTOM END” roof panel at the end with distance holders except for the last “A-TOP” roof panel. See Figure A.11.

⚠ ATTENTION

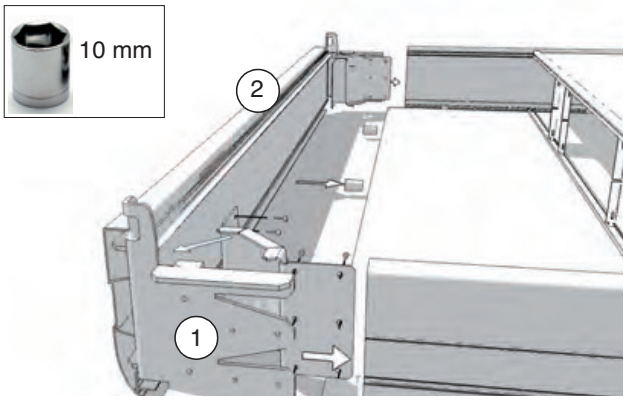
Corner cut-out to be added for the last “A-TOP” roof panel as per figure A.5 and in case of leg mounting, make sure to use the “C-BOTTOM END” panel with corner cut-out as per Figure A.6

FIGURE – A.11



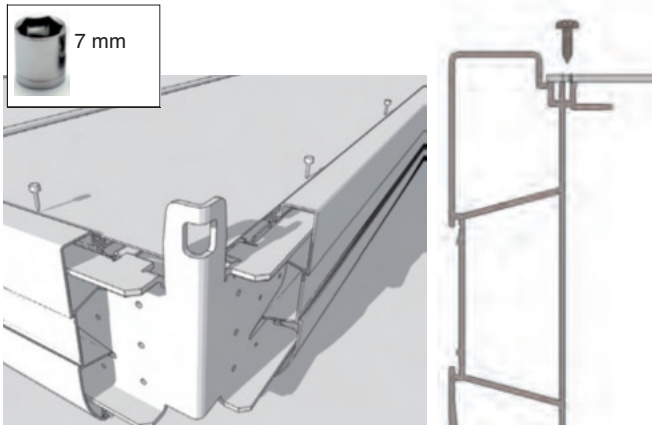
18. Mount the remaining inner and outer corner pieces (1) and main frame profile (2). See Figure A.12.

FIGURE – A.12



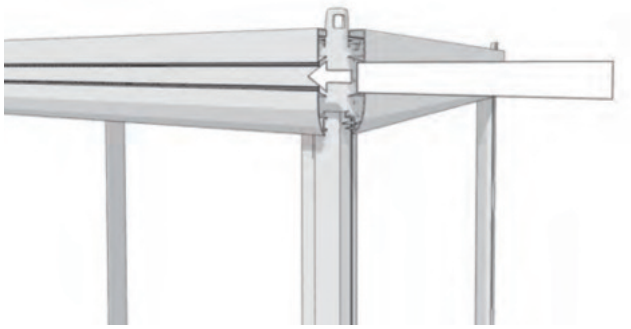
19. Place the last “A-TOP” roof panel and fasten them all. See Figure A.13.

FIGURE – A.13



20. Slide the branding strips in the main frame profiles. See Figure A.14.

FIGURE A.14



MODULAR FUME HOOD XL; DOUBLE COMPARTMENT:

⚠ ATTENTION

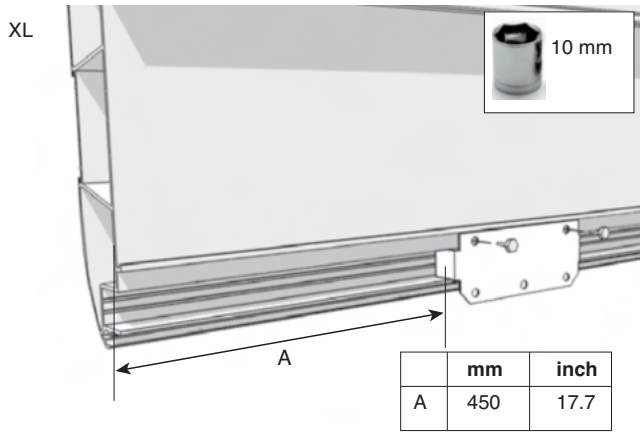
For double compartment hoods, do not make cut-outs on both corners of the "A-TOP" and "C-BOTTOM END" panels. Review the "A-TOP" and "C-BOTTOM END" panel lay-out and cut only on the required corners. Corner cutting is not required for the panel assembled adjacent to the T-brackets.

a) Follow steps 1 to 3 as per single compartment

In case of Modular Fume Hood XL/standing:

Mount connection plates (2 plates on each on all four corners) of corner reinforcement set on the main profiles using self-tapping screws. See Figure A.15.

FIGURE – A.15



	mm	inch
A	450	17.7

b) Mount a T-bracket on the main frame profile. See Figure A.16

c) Determine the right distance between the profiles by means of a long H-profile. See Figure A.17.

d) Mount two cross profiles on T-bracket. See Figure A.17.

e) Place the other T-bracket on the loose side of cross-profiles to keep them together. Do not fasten the screws yet. See Figure A.17.

f) Make sure the cross-profiles are precisely square (90°) to the main frame profile. See Figure A.17.

g) Finish the entire compartment (except for the last "A-TOP" roof panel) before continuing with the next compartment. See Figure A.17 and Figure A.12. Follow steps 4 to 18 as per single compartment

h) Use a cargo lashing (1) around the end of the profiles to keep them in the right position.

i) Fasten the T-bracket to the cross profiles and the main frame profile.

j) Follow steps 19 and 20 as per single compartment

MODULAR FUME HOOD XL; TRIPLE COMPARTMENT:

⚠ ATTENTION

For triple compartment hoods, do not make cut-outs on both corners of the "A-TOP" and "C-BOTTOM END" panels. Review the "A-TOP" and "C-BOTTOM END" panel lay-out and cut only on the required corners. Corner cutting is not required for the panel assembled adjacent to the T-brackets.

a) Follow steps 1 to 3 as per single compartment

In case of Modular Fume Hood XL/standing:

Mount connection plates (2 plates on each on all four corners) of corner reinforcement set on the main profiles using self-tapping screws. See Figure A.15.

b) Mount two T-brackets on the main frame profile. See Figure A.16.

c) Determine the ideal position of the T-brackets by means of the long H-profiles to be used between the roof panels.

d) Mount two cross profiles on each T-bracket. See Figure A.17.

e) Place the other T-bracket(s) on the loose side of cross-profiles to keep them together. Do not fasten the screws yet. See Figure A.17.

f) Make sure the cross-profiles are precisely square (90°) to the main frame profile. See Figure A.17.

g) Finish the entire compartment (except for the last "A-TOP" roof panel) before continuing with the next compartment. See Figure A.17 and Figure A.12. Follow steps 4 to 18 as per single compartment

h) Use a cargo lashing (1) around the end of the profiles to keep them in the right position.

i) Fasten the T-bracket(s) to the cross profiles and the main frame profile.

j) Follow steps 19 and 20 as per single compartment

FIGURE – A.16

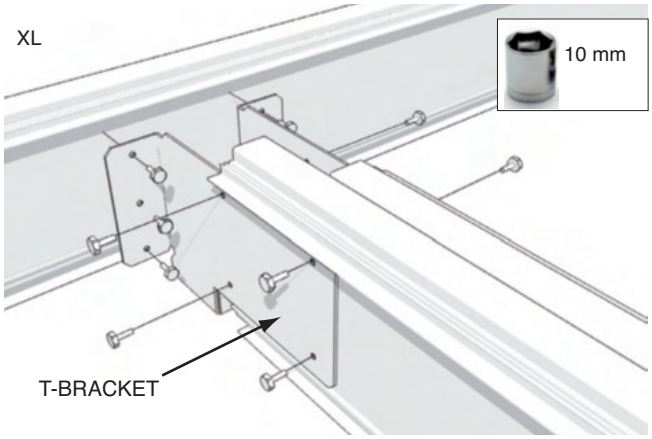
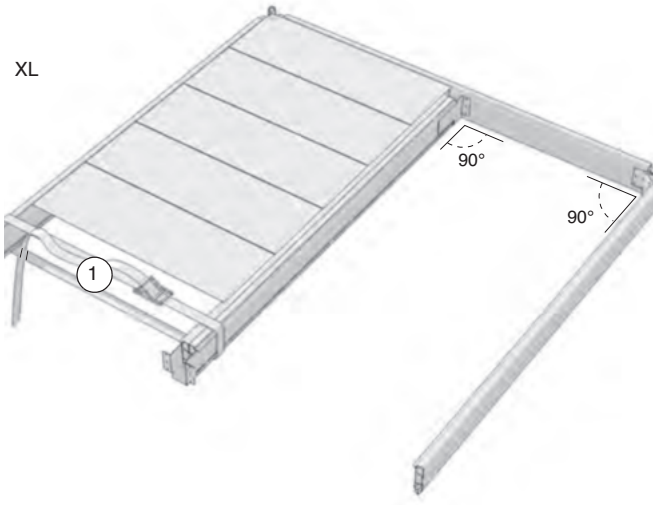


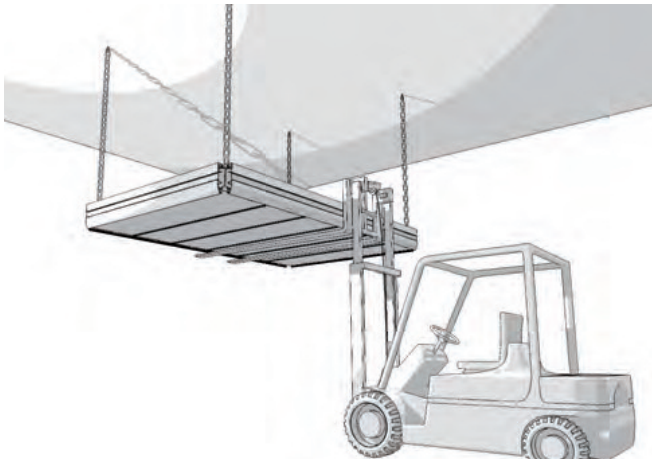
FIGURE – A.17



Hanging:

1. Lift the hood, preferably using a fork-lift. See Figure A.18.
2. Mount the hood to the ceiling. See Figure A.18.

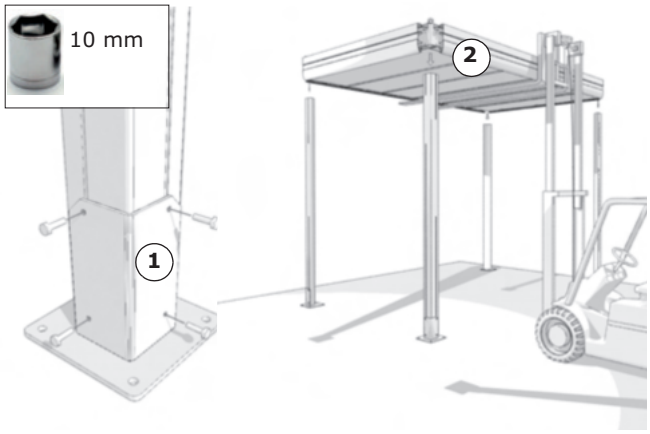
FIGURE – A.18



Standing:

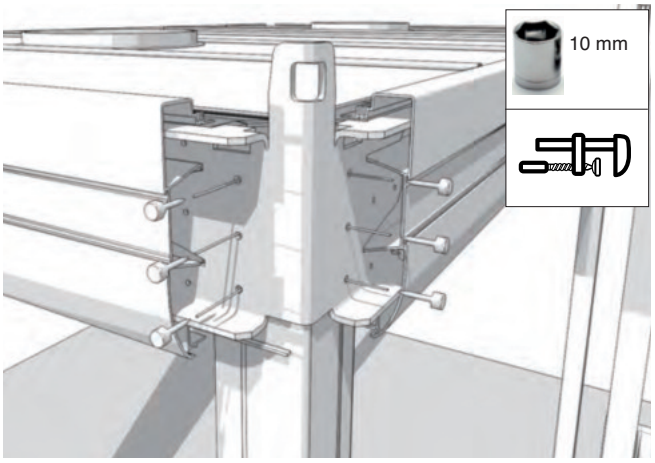
1. Mount the floor mounting plates under the legs (1). See Figure A.19.
2. Lift the hood, preferably using a fork-lift truck (2). Modular Fume Hood XL: use two fork-lift trucks. See Figure A.19.
3. Position the legs under the corners of the hood (3). The round sides of the legs should be directed to the inside. It is recommended to call in four persons to hold the legs. See Figure A.19.
4. Let down the hood easily, until it rests on all four legs. See Figure A.19.

FIGURE – A.19



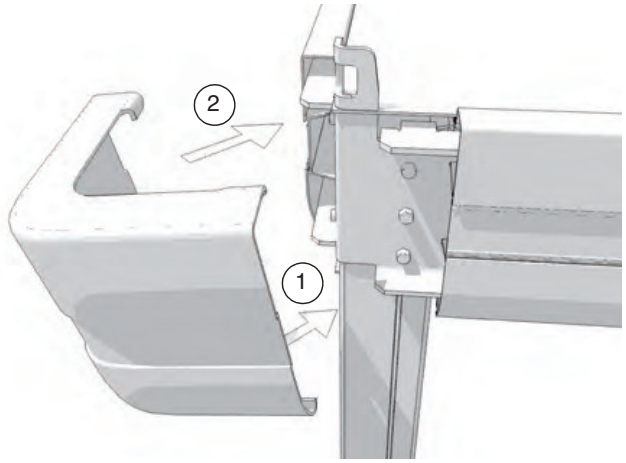
5. Make sure to position the legs as close to the corner pieces as possible, preferably using clamps. See Figure A.20.
6. Fasten the legs to the corner pieces. See Figure A.20.

FIGURE – A.20



7. Place the corner covers. See Figure A.21.

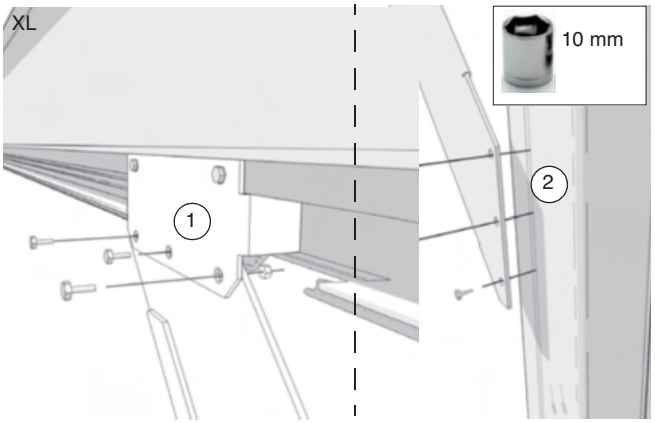
FIGURE – A.21



Modular Fume Hood XL/standing:

1. Mount the corner reinforcements to the connection plates using bolts and locknuts (1). See Figure A.22.
2. Mount the corner reinforcement to the legs using self-tapping screws (2). See Figure A.22.

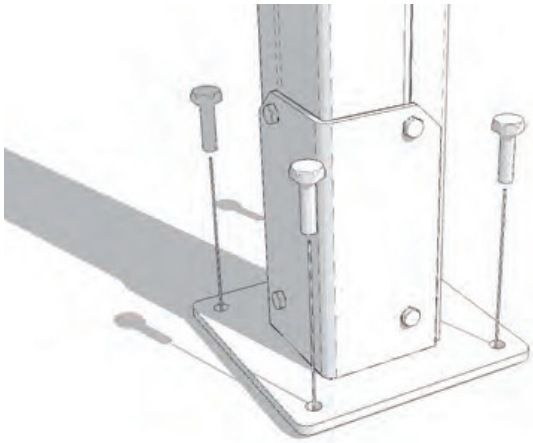
FIGURE – A.22



Standing:

1. Place the hood on its final position. See Figure A.23.
2. Fasten the floor mounting plates to the floor. See Figure A.23.

FIGURE – A.23



3. It is strongly recommended to place column guards around the legs.
4. Connect the connection flange to an external extraction/filtration system. For recommended extraction capacity and pressure drop data refer to Technical Specifications.

⚠ ATTENTION

- **During installation, prevent any ductwork from leaning on the roof panels.**
- **The profiles, on the other hand, are strong enough to support the duct.**

INSTALLATION

Strip brackets and welding strips

1. Cut the welding strips to the desired length.
2. Fasten the welding strips in the brackets. See Figure A.24.
3. Attach the brackets to the main frame profiles. See Figure A.25.

FIGURE – A.24

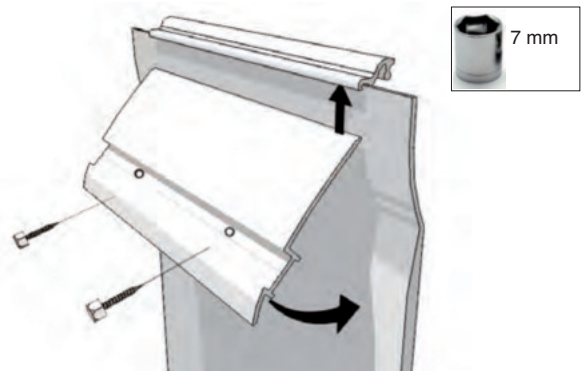
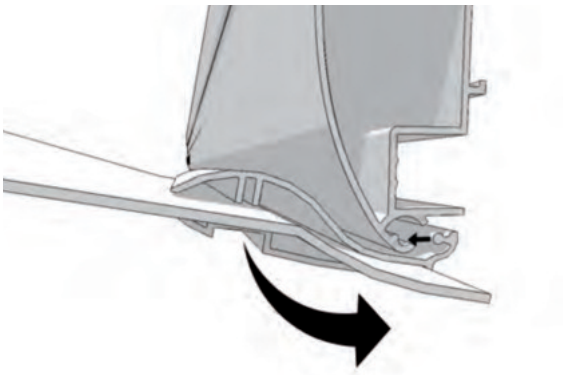


FIGURE – A.25



OPERATION

The Modular Fume Hood is placed over the working area and has to be connected to an external extraction/filtration system. The bottom roof panels work as a deflector plate, directing the airflow to the slots of the hood. The extracted air leaves the hood in the middle through one or two connection flanges mounted on top.

The use of welding strips further optimizes the airflow and provides adequate visual protection against exposure to UV rays (dark green and orange-red welding strips only).

INTENDED USE

The Modular Fume hood has been designed exclusively to capture fume caused by several industrial processes, such as (robotic) welding, grinding and cutting. It is to be placed over the working area and has to be connected to an external extraction/filtration system. Using the product for other purposes is considered contrary to its intended use. The manufacturer accepts no liability for any damage or injury resulting from such use. The product has been built in accordance with state-of-the-art standards and recognized safety regulations. Only use this product when in technically perfect condition in accordance with its intended use and the instructions explained in the user manual.

OPTIONS AND ACCESSORIES

The following products can be obtained as an option and/or accessory:

A Legs
Aluminum legs for floor mounting. They are available in various heights.

B Corner Reinforcement Set
To be mounted diagonally between the main frame profiles and the legs to improve the strength of the hood construction. Required for leg-mounted Modular Fume Hoods XL.

C Floor mounting set
Mounting plate set to fix a leg mounted Modular Fume Hood to the floor. Needed if using legs.

SERVICE, MAINTENANCE AND REPAIRS

Observe the maintenance intervals given in this manual. Overdue maintenance can lead to high costs for repair and revisions and can render the guarantee null and void.

Always use tools, materials, lubricants and service techniques which have been approved by the manufacturer. Never use worn tools and do not leave any tools in or on the product.

Safety features which have been removed for service, maintenance or repairs, must be put back immediately after finishing these jobs and it must be checked that they still function properly.

⚠ ATTENTION

Industrial vacuum cleaner used during service and maintenance should have HEPA rated filtration.

MAINTENANCE

The product has been designed to function without problems for extended periods with minimum maintenance. In order to guarantee optimal performance level, regular maintenance and cleaning activities are required which are described in this chapter. If you observe the necessary caution and carry out the maintenance at regular intervals, any problems occurring will be detected and corrected before they lead to a total breakdown.

The indicated maintenance intervals can vary depending on the specific working and ambient conditions. Therefore it is recommended to thoroughly inspect the complete product once every year in addition to the indicated periodic maintenance.

PERIODIC MAINTENANCE

The maintenance activities in the Table D.1 indicated by (1) can be carried out by the user; other activities are strictly reserved for well trained and authorized service engineers.

⚠ WARNING

Improper maintenance can cause fire. Always maintain the product according to the instructions of this manual.

⚠ ATTENTION

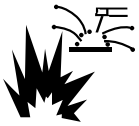
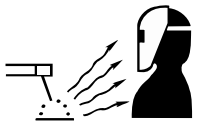
Always wear a respirator and gloves during service and maintenance work. Industrial vacuum cleaner used during service and maintenance should have HEPA rated filtration.

⚠ WARNING

Never stand on top of the fume hood.

TABLE D.1 – MAINTENANCE SCHEDULE

			Frequency	
		Light use	**Every 3-6 month**	**Every 12 months**
		Normal use	**Every 3 months**	**Every 9 months**
Component	**Action**	Heavy use	**Every 1-2 months**	**Every 6 months**
Main frame profiles, roof panels	Check outside of the hood and clean it with a nonaggressive detergent.		X	
Lighting fixture	Check working light.		X	
Automatic damper (if any)	Check functionality of the connected automatic damper.		X	X
Bottom roof panels and extraction slots	Check the bottom roof panels and extraction slots of the hood and clean thoroughly.		X	X
Top roof panels	Clean the inside of the hood and slots by removing top roof panels.			X

			
WARNING	● Do not touch electrically live parts or electrode with skin or wet clothing. ● Insulate yourself from work and ground.	● Keep flammable materials away.	● Wear eye, ear and body protection.
Spanish **AVISO DE PRECAUCION**	● No toque las partes o los electrodos bajo carga con la piel o ropa mojada. ● Aislese del trabajo y de la tierra.	● Mantenga el material combustible fuera del área de trabajo.	● Protéjase los ojos, los oídos y el cuerpo.
French **ATTENTION**	● Ne laissez ni la peau ni des vêtements mouillés entrer en contact avec des pièces sous tension. ● Isolez-vous du travail et de la terre.	● Gardez à l'écart de tout matériel inflammable.	● Protégez vos yeux, vos oreilles et votre corps.
German **WARNUNG**	● Berühren Sie keine stromführenden Teile oder Elektroden mit Ihrem Körper oder feuchter Kleidung! ● Isolieren Sie sich von den Elektroden und dem Erdboden!	● Entfernen Sie brennbarres Material!	● Tragen Sie Augen-, Ohren- und Körperschutz!
Portuguese **ATENÇÃO**	● Não toque partes elétricas e electrodos com a pele ou roupa molhada. ● Isole-se da peça e terra.	● Mantenha inflamáveis bem guardados.	● Use proteção para a vista, ouvido e corpo.
Japanese **注意事項**	● 通電中の電気部品、又は溶材にヒフやぬれた布で触れないこと。 ● 施工物やアースから身体が絶縁されている様にして下さい。	● 燃えやすいものの側での溶接作業は絶対にしてはなりません。	● 目、耳及び身体に保護具をして下さい。
Chinese **警 告**	● 皮肤或濕衣物切勿接觸帶電部件及銲條。 ● 使你自己與地面和工件絕緣。	● 把一切易燃物品移離工作場所。	● 佩戴眼、耳及身體勞動保護用具。
Korean **위 험**	● 전도체나 용접봉을 젖은 헝겁 또는 피부로 절대 접촉치 마십시요. ● 모재와 접지를 접촉치 마십시요.	● 인화성 물질을 접근 시키지 마시요.	● 눈, 귀와 몸에 보호장구를 착용하십시요.
Arabic **تحذير**	● لا تلمس الاجزاء التي يسري فيها التيار الكهربائي أو الالكترود بجلد الجسم أو بالملابس المبللة بالماء. ● ضع عازلا على جسمك خلال العمل.	● ضع المواد القابلة للاشتعال في مكان بعيد.	● ضع أدوات وملابس واقية على عينيك وأذنيك وجسمك.

READ AND UNDERSTAND THE MANUFACTURER'S INSTRUCTION FOR THIS EQUIPMENT AND THE CONSUMABLES TO BE USED AND FOLLOW YOUR EMPLOYER'S SAFETY PRACTICES.

SE RECOMIENDA LEER Y ENTENDER LAS INSTRUCCIONES DEL FABRICANTE PARA EL USO DE ESTE EQUIPO Y LOS CONSUMIBLES QUE VA A UTILIZAR, SIGA LAS MEDIDAS DE SEGURIDAD DE SU SUPERVISOR.

LISEZ ET COMPRENEZ LES INSTRUCTIONS DU FABRICANT EN CE QUI REGARDE CET EQUIPMENT ET LES PRODUITS A ETRE EMPLOYES ET SUIVEZ LES PROCEDURES DE SECURITE DE VOTRE EMPLOYEUR.

LESEN SIE UND BEFOLGEN SIE DIE BETRIEBSANLEITUNG DER ANLAGE UND DEN ELEKTRODENEINSATZ DES HERSTELLERS. DIE UNFALLVERHÜTUNGSVORSCHRIFTEN DES ARBEITGEBERS SIND EBENFALLS ZU BEACHTEN.

			
● Keep your head out of fumes. ● Use ventilation or exhaust to remove fumes from breathing zone.	● Turn power off before servicing.	● Do not operate with panel open or guards off.	**WARNING**
● Los humos fuera de la zona de respiración. ● Mantenga la cabeza fuera de los humos. Utilice ventilación o aspiración para gases.	● Desconectar el cable de alimentación de poder de la máquina antes de iniciar cualquier servicio.	● No operar con panel abierto o guardas quitadas.	Spanish **AVISO DE PRECAUCION**
● Gardez la tête à l'écart des fumées. ● Utilisez un ventilateur ou un aspirateur pour ôter les fumées des zones de travail.	● Débranchez le courant avant l'entretien.	● N'opérez pas avec les panneaux ouverts ou avec les dispositifs de protection enlevés.	French **ATTENTION**
● Vermeiden Sie das Einatmen von Schweibrauch! ● Sorgen Sie für gute Be- und Entlüftung des Arbeitsplatzes!	● Strom vor Wartungsarbeiten abschalten! (Netzstrom völlig öffnen; Maschine anhalten!)	● Anlage nie ohne Schutzgehäuse oder Innenschutzverkleidung in Betrieb setzen!	German **WARNUNG**
● Mantenha seu rosto da fumaça. ● Use ventilação e exhaustão para remover fumo da zona respiratória.	● Não opere com as tampas removidas. ● Desligue a corrente antes de fazer serviço. ● Não toque as partes elétricas nuas.	● Mantenha-se afastado das partes moventes. ● Não opere com os paineis abertos ou guardas removidas.	Portuguese **ATENÇÃO**
● ヒュームから頭を離すようにして下さい。 ● 換気や排煙に十分留意して下さい。	● メンテナンス・サービスに取りかかる際には、まず電源スイッチを必ず切って下さい。	● パネルやカバーを取り外したままで機械操作をしないで下さい。	Japanese **注意事項**
●頭部遠離煙霧。 ●在呼吸區使用通風或排風器除煙。	●維修前切斷電源。	●儀表板打開或沒有安全罩時不準作業。	Chinese **警 告**
● 얼굴로부터 용접가스를 멀리하십시요. ● 호흡지역으로부터 용접가스를 제거하기 위해 가스제거기나 통풍기를 사용하십시요.	● 보수전에 전원을 차단하십시요.	● 판넬이 열린 상태로 작동치 마십시요.	Korean **위 험**
● ابعد رأسك بعيداً عن الدخان. ● استعمل التهوية أو جهاز ضغط الدخان للخارج لكي تبعد الدخان عن المنطقة التي تتنفس فيها.	● اقطع التيار الكهربائي قبل القيام بأية صيانة.	● لا تشغل هذا الجهاز اذا كانت الاغطية الحديدية الواقية ليست عليه.	Arabic **تحذير**

LEIA E COMPREENDA AS INSTRUÇÕES DO FABRICANTE PARA ESTE EQUIPAMENTO E AS PARTES DE USO, E SIGA AS PRÁTICAS DE SEGURANÇA DO EMPREGADOR.

使う機械や溶材のメーカーの指示書をよく読み、まず理解して下さい。そして貴社の安全規定に従って下さい。

請詳細閱讀並理解製造廠提供的説明以及應該使用的銀捍材料，並請遵守貴方的有関勞動保護規定。

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اقرأ بتمعن وافهم تعليمات المصنع المنتج لهذه المعدات والمواد قبل استعمالها واتبع تعليمات الوقاية لصاحب العمل.

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