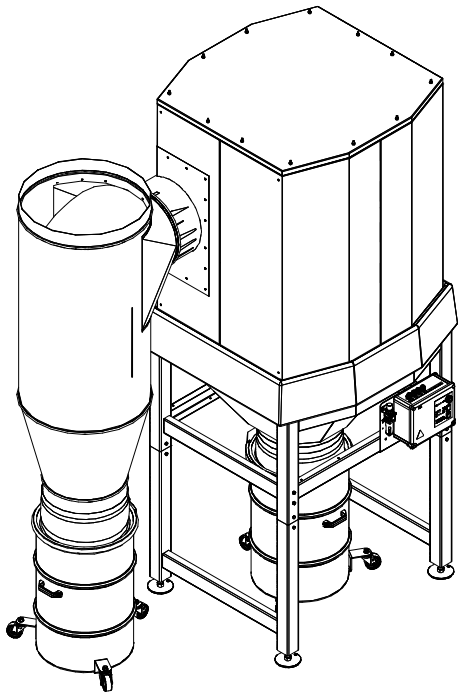
LINCOLN ELECTRIC

Operator's Manual

Statiflex® 6000-MS



For use with machines having Product Numbers:

L10393-3 - Filtration Unit & Controls

M18440-1 - Preseperator

GENUINE LINCOLN PARTS™

Register your machine:
www.lincolnelectric.com/register

Authorized Service and Distributor Locator:
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IM735-A | Issue Date Feb-19

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

Diesel Engines

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

Gasoline Engines

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

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.

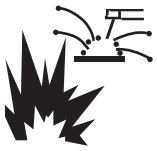
5.c. Do not weld in locations near chlorinated hydrocarbon vapors coming from degreasing, cleaning or spraying operations. The heat and rays of the arc can react with solvent vapors to form phosgene, a highly toxic gas, and other irritating products.

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 website: 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.

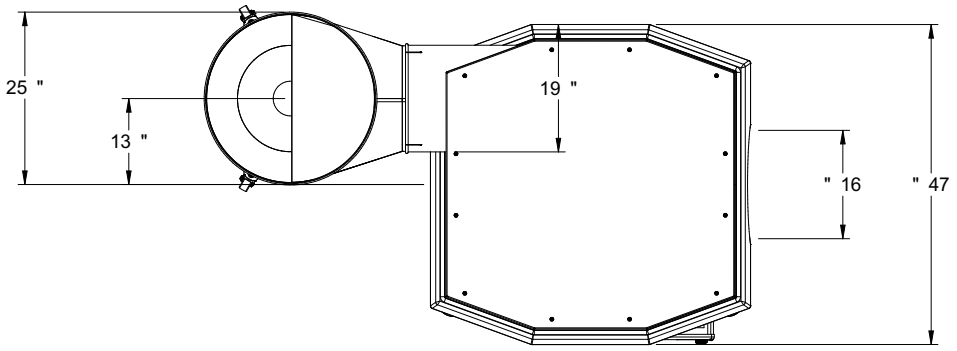
TLV and PEL values are as of October 2013. Always check Safety Data Sheet (SDS) with product or on the Lincoln Electric website at http://www.lincolnelectric.com

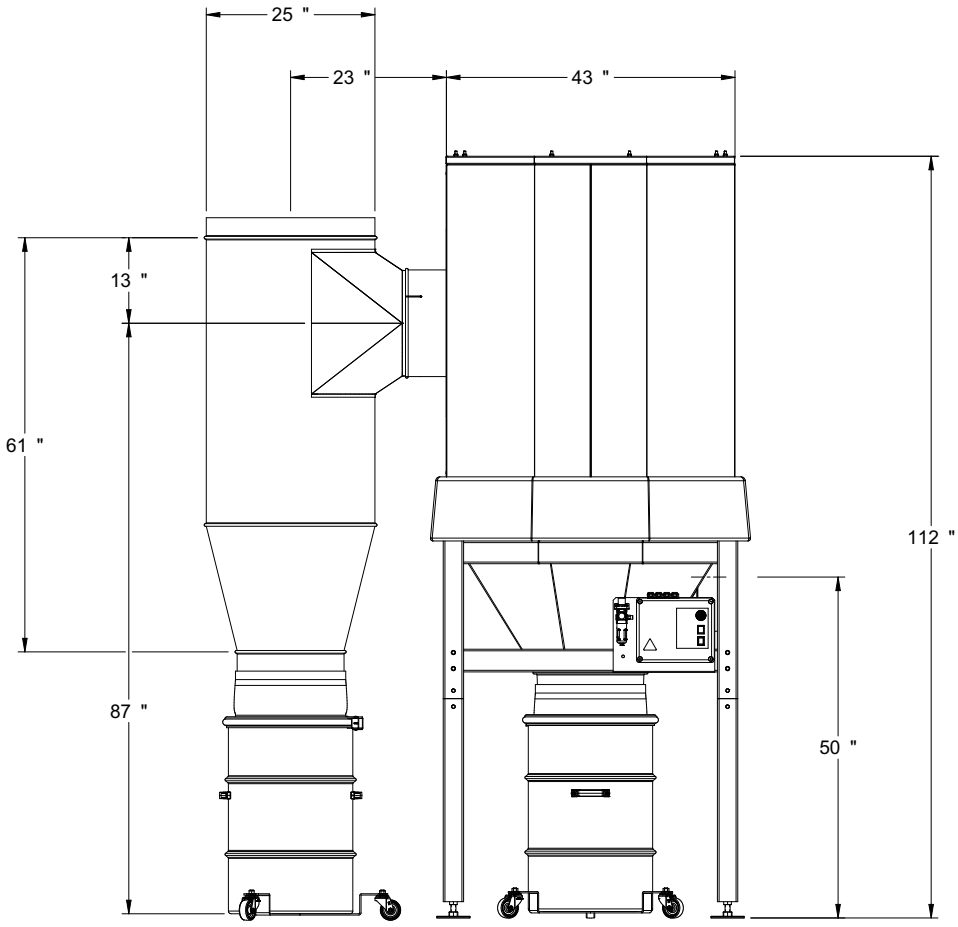
Content/details may be changed or updated without notice. For most current Instruction Manuals, go to parts.lincolnelectric.com.

TECHNICAL SPECIFICATIONS

GENERAL	
NET WEIGHT:	550 lb (250 kg)
MAXIMUM AIRFLOW:	3,750 CFM (6,400 m^3/h)
FILTER SURFACE AREA:	1,400 tt2 total (130m^2)
COMPRESSED AIR:	75 - 90 PSI (5 - 6 BAR)

PRESEPERATOR	
NET WEIGHT:	110 LB (50KG)





Read entire Installation Section before installing the Statiflex 6000-MS

INSTALLATION

Safety Precautions

Read entire installation section before starting installation.

⚠ WARNING

ELECTRIC SHOCK can kill.

- **Do not touch electrically live parts such as internal wiring.**
- **Turn the input power off at the fuse box before working on this equipment.**
- **Have a qualified person install and service this equipment.**

MOVING PARTS can injure.

- **Do not operate with covers open or filter removed.**
- **Keep away from moving parts.**

FIRE HAZARD!!

Never use this product for filtering flamable, glowing or burning particles or liquids. Never use this product for filtering aggressive vapors (such as hydrochloric acid)

For safety reasons, most welding applications require the installation of the preseparator along with a Statiflex 6000-MS. This Preseparator will reduce the risk of fire. Verify with a qualified engineer that the complete system is properly designed to remove hot particles from the airstream prior to the preseparator.

Only qualified personnel should install, use or service this equipment.

GENERAL DESCRIPTION

The Statiflex 6000-MS is a filtration system for low vacuum, high volume extraction systems. This can be used along with multiple extraction devices. The Statiflex 6000-MS features two large cellulose filter cartridges which provide 99.8% filtration with 1,400 tt^2 of surface area (130m^2).

Dirty air enters through the preseparator, which separates out larger particles, then into the inlet of the Statiflex 6000-MS, through the outside of the filter cartridges and out the outlet.

The Statiflex 6000-MS uses an automatic filter cleaning system to maintain the filter and reduce maintenance costs. Fume collected on the outside of the filter is knocked off by a blast of compressed air from the cleaning system. Fume then drops into the dust collection drum at the bottom of the unit.

When the pressure drop across the filter reaches a set point due to an increase in fume on the outside of the filter, a solenoid releases air from a compressed air reservoir tank mounted inside the filter cartridge. This air goes through several holes in the cleaning tube, cleaning one section of the filter with multiple air jets. The cleaning tube then shifts to the next section of the filter until the pressure drop again reaches the set point, triggering the next cleaning pulse.

A manual cleaning cycle is initiated by pressing the button on the face of the control box. The system pauses between sections of the filter, allowing the air tank to repressurize. The Statiflex 6000-MS requires 75 - 90 psi of clean, dry compressed air to function properly.

A timer in the control box can also set preset times for automatic filter cleaning, on-line or off-line.

INSTALLING THE STATIFLEX 6000-MS

⚠ WARNING

The installer is responsible for following local safety codes and regulations.

Before drilling, verify locations of existing gas, water, or electrical conduits.

This section describes installation of the Statiflex 6000-MS and preseparator only. For information regarding the installation of wall mounted arms or SF2400 Fans, consult the manuals packed with these items.

The Statiflex 6000-MS Filter Unit Includes:

- Central Filter cabinet with cleaning system, filter cartridges, inlet flange and control box all installed.
- Two (2) leg assemblies with mounting hardware.
- Collection Drum

The Preseparator Includes:

- Preseparator ductwork
- Collection Drum

Mount the Statiflex where there is sufficient space overhead to change the filter cartridges (30 inches (750mm) of clearance or 112 ft (3.66m) floor to ceiling height). Refer to the dimensional drawings on page A-1 for other spacing requirements.

Using a fork lift, raise the titler cabinet and install the two leg assemblies as shown.

Mount the drum bushing on top of the drum and position underneath the Statiflex Filter Cabinet. Using a hose clamp, connect the drum bushing to the filter unit and seal.

Installing the Preseparator

Connect the preseparator outlet to the inlet of the Statiflex 6000-MS. Mount the drum bushing on top of the drum and position underneath the preseparator. Using a hose clamp, connect the drum bushing to the preseparator and seal. Be sure that the valve in the lid is in the open (vertical} position.

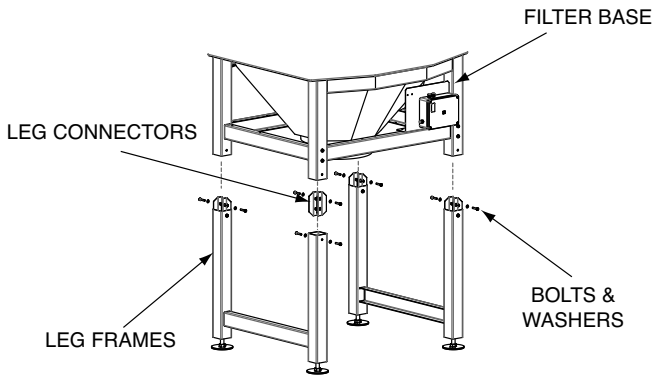
Compressed Air

Connect 75 - 90 PSI (5 - 6 BAR) of clean, dry compressed air to the regulator mounted on the filter unit next to the control box. **DO NOT INITIATE A CLEANING CYCLE DURING THE FIRST TEN HOURS OF OPERATION!!!** This allows the precoating powder to get established on the surface of the filter. If a cleaning cycle is initiated during this initial period, the precoating powder may not be well established on the cartridge and will result in lower efficiency and shorter life.

CONNECTION OF FILTER BASE TO FRAME

1. Locate the thick set of legs and prepare for installation of filter base. See Figure A.5.

FIGURE A.5



2. Insert leg connectors half way into leg frames. See Figure A.5.
3. Insert bolts and washers into lower holes and hand tighten. See Figure A.5.
4. Using a lift or hoist, position the assembled filter base onto the leg assembly.
5. Insert bolts and washers into upper holes of the leg connectors. Using a 13mm nutdriver, tighten all nuts and bolts securely.

⚠ WARNING

FALLING EQUIPMENT can cause injury.

- **Lift only with equipment of adequate lifting capacity.**
- **Be sure machine is stable when lifting.**
- **Do not operate machine while suspended or when lifting.**

ELECTRICAL INSTALLATION

⚠ WARNING

ELECTRIC SHOCK can kill.

- **Do not touch electrically live parts such as internal wiring.**
- **Turn the input power off at the fuse box before working on this equipment.**
- **Have a qualified person install and service this equipment.**

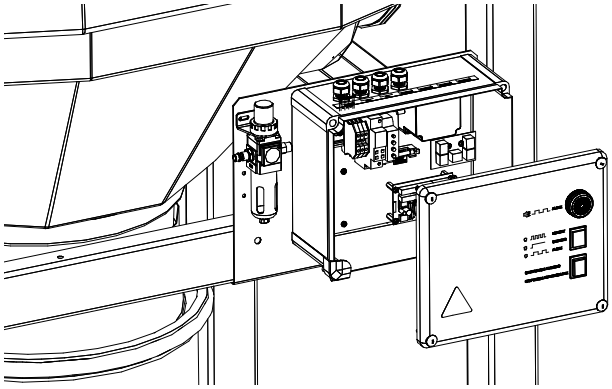
All local codes and standards supercede any of the following installation instructions.

Only a qualified electrician should electrically connect the Statiflex 6000-MS.

Connect grounded 110V AC to the control box as shown in the wiring diagram. Be sure that the transformer is connected for 110V input power and that the input power is properly connected with the strain relief.

The control box is not suitable for outdoor installation. If the filter unit must be installed outdoors, the control box must be removed from the filter unit and remotely mounted indoors. This should be performed by a qualified electrician and done to all applicable codes and standards.

230V supply power is not necessary for the clock timer; the transformer will supply sufficient 230V control power for its operation. The only input needed is 115V AC.



OPERATION

Read and understand this entire section before operating your Statiflex 6000-MS Filter Unit.

Safety Precautions

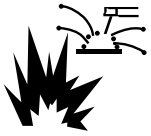
Do not attempt to use this equipment until you have thoroughly read all operating and maintenance manuals supplied with your equipment and any related welding machine it will be used with. They include important safety precautions, operating and maintenance instructions and parts lists.

⚠ WARNING

ELECTRIC SHOCK can kill.

- **Do not touch electrically live parts or electrode with skin or wet clothing.**
- **Insulate yourself from work and ground.**
- **Always wear dry insulating gloves**

WELDING SPARKS can cause fire or explosion.



- **Keep flammable material away.**
- **Do not weld upon containers which have held combustibles.**

ARC RAYS can burn.

- **Wear eye, ear and body protection.**

FUMES and GASES can be dangerous.

- **Although the removal of the particulate matter from welding smoke may reduce the ventilation requirement, concentrations of the clear exhausted fumes and gases may still be hazardous to health. Avoid breathing concentrations of these fumes and gases. Use adequate ventilation when welding. See ANSI Z49.1, "Safety in Welding and Cutting", published by the American Welding Society.**

Only qualified personnel should operate this equipment.

ADDITIONAL SAFETY PRECAUTIONS

Always operate this equipment with the filter and arm installed and all covers in place as these provide maximum protection from moving parts and insure proper vacuum operation and cooling air flow.

OPERATING INSTRUCTIONS

The operation of fans and extraction arms is covered under manuals shipped with that equipment. The following instructions refer primarily to the filter cleaning system of the Statiflex 6000-MS

The inlet of the Statiflex 6000-MS is the upper connection on the corner of the unit. The outlet is in the middle, at the bottom. Dirty air enters the inlet (usually through the preseparator to remove the larger particles), passes around the baffle and through the filter cartridges. The standard cartridges are cellulose (paper); polyester replacements are available. The clean air passes through the inside of the cartridges, downward and through the outlet. The filter cartridges filter out 99.8% of the particles, but do not remove gases. While typically not produced in large quantities in the arc welding environment, the build-up of these gases should be avoided. Plasma cutting commonly produces noticeable amounts of gases such as oxides

of Nitrogen (NOx). Exhaust air from plasma cutting (after filtering) should be exhausted outside where applicable.

A preseparator is strongly recommended for most applications and is mandatory for cutting applications.

Lincoln Electric should review the system design of any system used for cutting to verify best protection against risk of fire in the filter cartridges.

As the filters collect fume on their surfaces, the pressure drop will increase and airflow will decrease. A filter cleaning system is installed to keep the pressure drop at a reasonable and stable level. This system operates automatically due to pressure drop and/or preset times, or manually. Compressed air from the reservoir tank blows through several holes in the cleaning tube, knocking dust and fume from one section of the filter cartridges. The cleaning tube then rotates to the next section of the filters and waits while the tank refills with compressed air.

Automatic cleaning due to pressure drop

The cleaning system will automatically signal a cleaning pulse due to increased pressure drop. When the pressure drop across the filters reaches a set point, one cleaning pulse is signalled. The system then waits for further signals. During normal operation, the indicator light will blink quickly. During the cleaning cycle, the indicator light will be on all the time. If the cleaning pulse does not reduce the pressure drop below the set point, the system will continue to pulse. If the pressure drop is not reduced below the set point after 240 pulses (approximately 4 hours), the indicator light will blink slowly and the alarm buzzer will sound.

To deactivate the alarm buzzer and alarm status of the indicator light, press the start/reset button on the control box. Work can continue while the cause of the alarm is determined. The cleaning system will continue to attempt to lower the pressure drop below the set point for another 240 pulses.

Automatic cleaning with the timer

In addition to the pressure drop cleaning, preset cleaning times can be established. These times will signal cleaning whether the fans are in operation or not. This allows for off-line cleaning as well as maintenance of filters during low-airflow operation. When there is low airflow (only one or two arms in operation), the pressure drop will be naturally low, even though dust accumulates on the surface. When higher airflow is used (all five arms are in use), this residual dust may cause a higher pressure drop and result in an alarm condition. In applications where this variability may happen, as well as cutting operations, timed cleaning is recommended.

DO NOT USE THE TIMER CLEANING DURING THE FIRST TEN HOURS OF OPERATION!! This allows the precoating powder to get established on the surface of the filter. If a cleaning cycle is initiated during this initial period, the precoating powder may not be well established on the cartridge and will result in lower efficiency and shorter life.

Timers can be set on the timer clock located in the control box. The cleaning cycle will run continuously (factory set at one pulse per minute) during the on time. The one minute interval can be lengthened by adjusting the timer relay to the right of the clock timer (off-time). One full revolution of the filters takes approximately 60 pulses.

Adjusting the cleaning and pause time.

The cleaning and pause times for the pressure-drop activated cleaning cycle are preprogrammed into the PC board software. The times for the clock-timer operated cleaning, however, are adjustable using the timer relay to the right of the clock timer. The cleaning pulse time (upper dials) is pre-set to 1 second. This should not be adjusted. The pause time has a minimum one minute, but can be increased using the lower dials. For off-line cleaning, longer pause times allow the fine dust to settle to the drum.

Manual Cleaning

DO NOT INITIATE A CLEANING CYCLE DURING THE FIRST TEN HOURS OF OPERATION!! This allows the precoating powder to get established on the surface of the filter. If a cleaning cycle is initiated during this initial period, the precoating powder may not be well established on the cartridge and will result in lower efficiency and shorter life.

A full cleaning cycle (one complete revolution around the filter) can be initiated by pressing the start/reset button on the control box. During this time, the cleaning pulse will fire, the tank will refill during a pause time, then the next section of the filter will be cleaned. This will continue until the complete filter has been cleaned. During the entire revolution, the indicator will light continuously. The cycle can be stopped at any time by pressing the start/reset button.

TIMER SWITCH

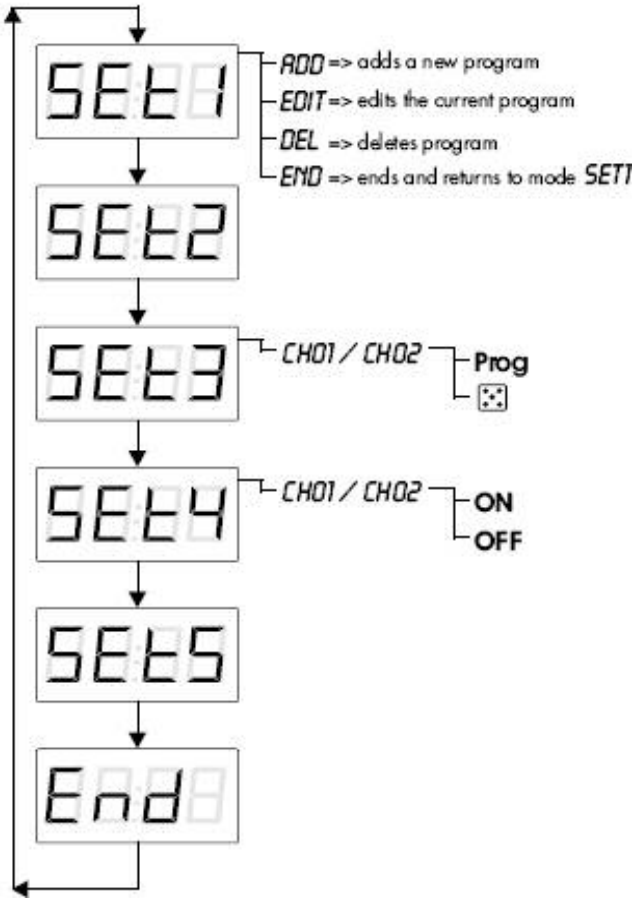
I.) Features of the Device:

- Two-channel version, mounting on DIN rail, terminals
- Daily and weekly program in one device
- Power supply 12-240 VAC / VDC
- Functions: according to the user program, manual, random, and holiday program modes.
- 100 memory places, illuminated LCD display
- Operational back up – up to 3 years
- Pulse and repeat cycle output

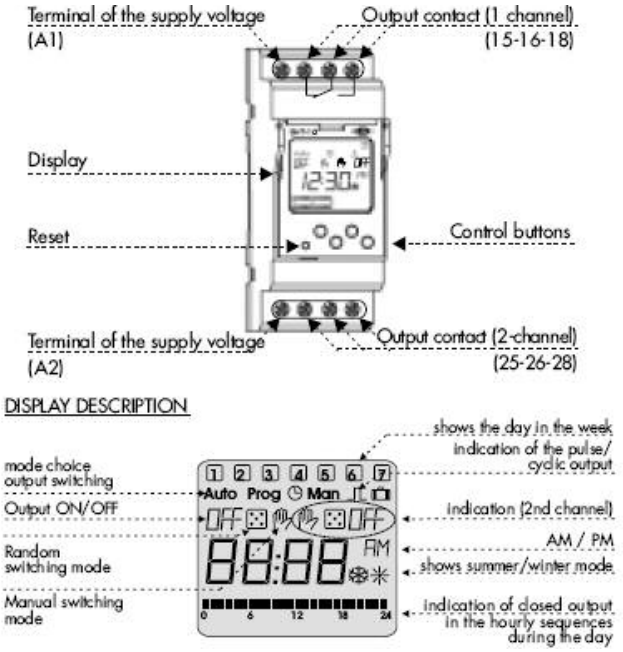
* **Before you start programming this timer switch, please make sure to read carefully through the following instructions.**

II.) Controls/Menu Description:

1.) Menu flow chart



2.) Description of the Device



3.) Description of the Control Buttons and Modes

button	ORIGINAL MODE		PROGRAMING MODE	
	SHORTLY ○	LONG ●	SHORTLY ○	LONG ●
+PRG		entrance to the program	upwards	fast upwards
-MAN1	Manual mode 1 channel		downwards	fast downwards
MAN2 ESC	Manual mode 2 channel		one level up	entrance to the start mode
OK	searching date/year		confirm	

a) There are four control buttons located on the face of the unit just below the display

b) First button going from left to right is the (PRG button) this button is used to enter the program setup menus by pressing and holding it down for 3 seconds

c) The PRG button has a plus sign (+) located right below the PRG on the face

d) The next button on the right of the (+PRG) button is the (-MAN) button

e) The (MAN) button can be quickly pressed while in the run mode operation to quickly turn on output 1 on and off manually

f) There is also a minus sign (-) located underneath this button which means that when the unit is in the program mode, this button can be quickly pressed nto go back to the previous screen or menu

g) The third button from the left is the (MAN2) which works just like the MAN button except it controls the output 2 relay during run mode

h) The third button from the left also works as a double button (ESC), which is used during the program mode to exit out of the menu or out of the program mode and back to the run mode

i) The button on the far right is the (OK) button

j) The (OK) button can be used to scroll through the date, time, and year setting during run mode operation by quickly pressing the button

k) The (Ok) button is also used as the enter button from entering the program parameters in the program mode

4.) Economical Mode

The 7DT-2CH is shipped with a pre-programmed real time in economical mode. The unit uses battery memory which allows the unit to keep data stored even when the unit does not have supply voltage on terminals A1 and A2. This device is capable of viewing the time with no supply voltage present by pressing any of the control buttons for two seconds. The 7DT-2CH display will illuminate and display pre-set time. When supply voltage is connected to terminals A1 and A2 the unit will continuously display the timing switch's status until supply voltage is removed.

5.) Illumination of Display

The 7DT-2CH illuminates whenever one of the control buttons are pressed and remains that way for 10 seconds after the last button was pressed. To have the LCD display stay illuminated permanently. The three control buttons (ESC/MAN2), (-MAN1), and the (OK) must be pressed and held down together from 3 second. The display will flicker once to show that the permanent illuminated feature has been entered. The same three buttons again must be pressed and held down simultaneously to turn the display illumination feature off. The display will flicker and than turn the display light off.

6.) Reset the Time, Date, and Year

The 7DT-2CH has a small hidden reset button located on the front left side of the unit (this can be seen on page 4 under description of the device). By using a pin with a diameter no bigger than 2 mm you can press this small hidden reset button (when pressed the screen will go blank). Upon releasing the button the display will show SHT-1 for 3 seconds (This is the version of firmware used) and go to starting mode. The reset will delete the real time, the set time of the pulse/cycle mode and all temporary functions. Reset will keep the set programs.

7.) Reset all the Programs

All storied programs can easily be erased by pressing down and holding both (+PRG) and (OK) buttons simultaneously for a few seconds. The word ALL will be displayed once the two control buttons have been held down. Now just push the (OK) button and the unit will delete all existing programs

V.) Setting the Date and Time

a) Press and hold the (+PRG) button for 3 seconds, SEt1 is what will display on the LCD screen (also you will see prog in the upper left corner of the display)

b) Now press the (+PRG) button to move to the next program option, SEt2 is now shown on the LCD screen (also you will see a symbol in the upper middle part of the display screen)

c) Press the (OK) button to enter the year setting menu 2000 (once in the display should have the last to digits blinking)

d) By using the (+PRG) and the (-MAN) buttons you can change the year

e) Once you have the number on the correct year press the (OK) button to save it to the memory and move to the next set up option.

f) On the next screen, the first two digits will be blinking. 03 Use the (+PRG) and the (-MAN) buttons to change the two digits to set the correct month (1-12) of the year.

g) Press (OK) button to enter the month into the memory of the 7DT-2CH.

h) The month is still displayed on the first two digits and now the second two digits are blinking

i) Once again by using the (+PRG) and the (-MAN) buttons you can scroll up and down to change the numeric values to represent the day of the month (1-31).

j) Press (OK) button to enter the day into the memory of the 7DT-2CH and move to the next set up option.

k) Now 24 is blinking (the unit will be in military time in this setting: example 13:30 is 1:30 P.M.)

l) Use the (+PRG) or (-MAN) buttons to choose between the 24 hours setting or the 12 hour setting (In 12 hours setting unit uses a.m. and p.m.)

m) Press the (OK) button on either the 24 or 12

n) Now use the (+PRG) and (-MAN) buttons to set the hours digits of the timer

o) Press the (OK) button

p) Now use the (+PRG) and (-MAN) buttons to set the minutes digits of the timer

q) Press the (OK) button to enter the data into memory

r) Now the unit will display On or OFF with two symbols representing summer and winter to the right.

On ???

s) Use the (+PRG) or (-MAN) buttons to scroll between the two chooses (On or OFF)

t) If you choose OFF and press (OK) button, the display will return back to the SEt2 menu

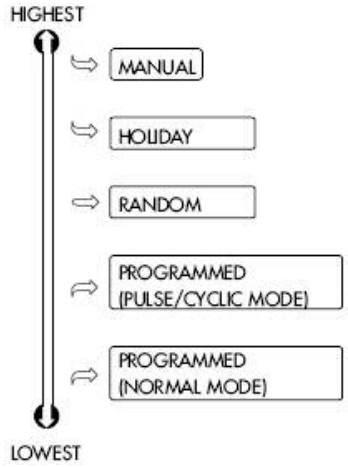
u) If you choose On and press (OK) button, you need to select the snow flake or sun star by scrolling with (+PRG) or (-MAN) buttons and than pressing the (OK) button (automatic switching is activated)

v) After correct symbol of the seasonal time has been chosen than press the (OK) button and the display will return to the SEt2 menu

w) Press the (ESC/MAN2) button to exit out of the program mode and back to the original run mode

VI.) Programming

1.) Mode Priorities



2.) Normal Mode

In the normal mode, output is switched according to the set start and stop time. You must first program a start time and which days of the week that the output is to turn on. Next you need to program the end time for the 7DT-2CH unit to turn off the output at a giving time for each set day.

a) Press and hold the (+PRG) button for 3 seconds, SEt1 is what shows on the LCD display (also you will see prog in the upper left corner of the display)

b) Press the (OK) button to enter into the programming parameters (the word **ADD** will be shown now)

c) Press the (OK) button (information about the number of the new program Pr.XX) example: Pr04 this just gives a numeric values to the memory location of this program

d) Now press the (OK) button (**Ch01** or **Ch02** should display)

e) You can choose whether to control output 1 or output 2 by scrolling between them with the (+PRG) or (-MAN) buttons

f) Press (OK) button, Out should be displayed on the LCD screen

[Note - If the screen doesn't look like this than scroll with (+PRG) or (-MAN) buttons until it does.] This step sets the selected channel (relay output) to be On (energized) for this command.

g) Press (OK) button

h) The two hours digits on the left side of the display should be blinking, adjust the numbers using the (+PRG) or (-MAN) buttons to set the desired hour that you want the output to come on and than press the (OK) button

i) Now the two minutes digits are blinking on the right side of the display, adjust the numbers using the (+PRG) or (-MAN) buttons to the desired minute time that you want the output to come on and than press the (OK) button

j) Now it is time to select which days of the week this program will be On/OFF (active/deactive) for by pressing the (OK) button on either on or off along with the corresponding number in the top of the display that represents the days of the week, ON

k) Choose On or OFF by using (+PRG) or (-MAN) to scroll between the two chooses and (OK) to enter the choose (the numbers at the top represent the days of the week by the number **1 = Monday** and the **7 = Sunday**)

l) Once the last day has been entered the word **ADD** is displayed and the two indicator bars will increase from left to right on the display and once the program has been saved the unit will say **ADD** with no indicator bars illuminated at the bottom of the screen

m) Press (OK) button, (will go back to the PR.XX screen the difference this time is that the numeric values has increase by one: example **PR.00** when you entered the first program but now the display will read **PR.01**)

n) Press (OK) button again, (now the display reads either **CH01** or **CH02** depending on which output you entered in the last program)

o) Choose the same output channel as before so than you can enter a stop time for the output

p) Press (OK) button, (**Out** should be displayed on the screen just like in step f). Press the (+PRG) or (-MAN) button to change setting from On to OFF, then press (OK) button. This step sets the selected channel (relay output) to be OFF (de-energized) for this command.

q) Press (OK) button

r) Now repeat steps H through L to enter the time of day and which days of the week you want to turn the corresponding output off [Note: make sure to choose the same days of the week to be ON in step J has you did in the previous program set up]

s) Once programming is completed and the word **ADD** is again displayed and you are finished adding programs then hit the (MAN 2/ESC) button twice to exit back to original run mode (the indicator bar that goes with the corresponding output should be illuminated at the button only on times where the output is going to be on for that day)

3.) Repeat Cycle Mode

The repeat cycle mode works the same way as the "normal mode" except the output cycles on and off between set times. The output will turn on and off for what ever the predetermined time was set in the, "*Cycle/Pulse Setting*", section on page 12. Both the on and off time have a range of 1 to 99 seconds each.

a) Press and hold the (+PRG) button for 3 seconds, SEt1 is what shows on the LCD display (also you will see **prog** in the upper left corner of the display)

b) Press the (OK) button to enter into the programming parameters (the word **ADD** will be shown now)

c) Press the (OK) button, (information about the number of the new program Pr.XX) example: Pr04 this just gives a numeric values to the memory location of this program

d) Now press the (OK) button, (**Ch01** or **Ch02** should display)

e) You can choose weather to control output 1 or output 2 by scrolling between them with the (+PRG) or (-MAN) buttons

f) Press (OK) button, Out should be displayed on the LCD screen

g) Use the (+PRG) or (-MAN) buttons to scroll through menu options so that the display looks like it does in step F, EXCEPT ⎍ the sign should now be blinking in the upper right of the display screen as well (this is how the repeat cycle mode is activated)

h) Press the (OK) button

i) The two hours digits on the left side of the display should be blinking, adjust the numbers using the (+PRG) or (-MAN) buttons to set the desired hour that you want the output to come on and than press the (OK) button

j) Now the two minutes digits are blinking on the right side of the display, adjust the numbers using the (+PRG) or (-MAN) buttons to the desired minute time that you want the output to come on and than press the (OK) button k)

k) Now it is time to select which days of the week this program will be on for by pressing the (OK) button on either on or off along with the corresponding number in the top of the display that represents the days of the week, On

l) Choose **ON** or **OFF** by using (+PRG) or (-MAN) to scroll between the two chooses and (OK) to enter the choose (the numbers at the top represent the days of the week by the number **1 = Monday** and the **7 = Sunday**)

m) Once the last day has been entered the word **ADD** is displayed and the two indicator bars will increase from left to right on the display and once the program has been saved the unit will say **ADD** with no indicator bars illuminated at the bottom of the screen

n) Press (OK) button, (will go back to the PR.XX screen the difference this time is that the numeric values has increase by one: example **PR.01** when you entered the first program but now the display will read **PR.02**)

o) Press (OK) button again, (now the display reads either **CH01** or **CH02** depending on which output you entered in the last program)

p) Choose the same output as before so then you can enter a stop time for the output

q) Press (OK) button, (**Out** should be displayed on the screen just like in step f except the word **OFF** should show up in the upper left corner, [Note - If the screen doesn't look like this than scroll with (+PRG) or (-MAN) buttons until it does and also sign will not be illuminated]

r) Press (OK) button

s) Now repeat steps I through M to enter the time of day and which days of the week you want to turn the corresponding output off (Note: make sure to choose the same days of the week to be **ON** in step J has you did in the previous program set up)

t) Once programming is complete and the word **ADD** is again displayed and you are finished adding programs than just hit the (MAN 2/ESC) button twice to exit back to original run mode, (the indicator bar that goes with the corresponding output should be illuminated at the button only on times where the output it to be on for that day)

4.) Pulse Mode

This mode will give an output pulse time during a set time and days of the week that is programmed. More than one output pulse can be given in a day by adding a new program and using the pulse mode again. The pulse length will be anywhere from 1 to 99 seconds long depending on the predetermined time that was set in the, "*Cycle/Pulse Setting*", section on page 12.

a) Press and hold the (+PRG) button for 3 seconds, Set1 is what shows on the LCD display (also you will see prog in the upper left corner of the display)

b) Press the (OK) button to enter into the programming parameters (the word **ADD** will be shown now)

c) Press the (OK) button, (information about the number of the new program Pr.XX) example: Pr04 this just gives a numeric values to the memory location of this program

d) Now press the (OK) button, (**Ch01** or **Ch02** should display)

e) You can choose whether to control output 1 or output 2 by scrolling between them with the (+PRG) or (-MAN) buttons

f) Press (OK) button, Out should be displayed on the LCD screen

g) Use the (+PRG) or (-MAN) buttons to scroll through menu options so that the display looks like it does in step F EXCEPT the On in the upper left corner, the Out in the center, and the ⎍ symbol in the upper right hand corner should now be illuminated (this is how this device is put into pulse mode)

h) Press the (OK) button

i) The two hours digits on the left side of the display should be blinking, adjust the numbers using the (+PRG) or (-MAN) buttons to set the desired hour that you want the output to come on and than press the (OK) button

j) Now the two minutes digits are blinking on the right side of the display, adjust the numbers using the (+PRG) or (-MAN) buttons to the desired minute time that you want the output to come on and than press the (OK) button

k) Now it is time to select which days of the week this program will be on for by pressing the (OK) button on either on or off along with the corresponding number in the top of the display that represents the days of the week, example: On

l) Choose **ON** or **OFF** by using (+PRG) or (-MAN) to scroll between the two chooses and (OK) to enter the choose (the numbers at the top represent the days of the week by the number **1 = Monday** and the **7 = Sunday**)

m) Once programming is done and the word **ADD** is again displayed and you are done adding programs than just hit the (MAN 2/ESC) button twice to exit back to original run mode, (the indicator bar that goes with the corresponding output should be illuminated at the button only on times where the output it to be on for that day)

5.) Random Switching Mode

This mode is displayed on the LCD screen by an illuminated the symbol ⚄ which causes a random switching of the output in the time range from 10 to 120 minutes. (Example use: This mode is for irregular switching of appliances like a light, which simulates presence of people in the house.

a) Press and hold the (+PRG) button for 3 seconds, Set1 is what shows on the LCD display (also you will see prog in the upper left corner of the display)

b) Press the (+PRG) twice until the display shows Set3 on the units LCD screen and the word MAN should also be illuminated

c) Press (OK) button, (**Ch01** or **Ch02** should display)

d) You can choose whether to control output 1 or output 2 by scrolling between them with the (+PRG) or (-MAN) buttons

e) Press (OK) button, (**prog** should be illuminated in the upper left corner)

f) Press the (+PRG) button, ⚄ should now display on the units LCD screen

g) Press (OK) button, display goes back to Set3 screen

h) Press (MAN 2/ESC) button to go back to the original run mode (now the will be blinking on either the left side or right side depending on which output you selected to go on and off randomly)

6.) Manual

This mode allows for the output to permanently switched on or off by a short press or the (-MAN) button to control output one or MAN2 / ESC) to control output two. This is done in the run mode operation for easy and quick control of both channel outputs. Pushing the button MAN buttons will override any other modes currently present at the time because it is the highest priority mode, see page 7 mode priorities diagram.

7.) Cycle/Pulse Output Setting

This sets the on and off cycle time for the repeat cycle and also the pulse output modes (step 2 and step 3 of the programming section). In the Pulse cycle mode, only the on time setting matters because it pulses on once for the preset time and at the end of the on time the output will remain off unless there is another program set for the pulse to go off again that day. In other words, the on time sets the pulse length and the off time doesn't matter unless you're in the repeat cycle mode.

a) Press and hold the (+PRG) button for 3 seconds, Set1 is what shows on the LCD display (also you will see prog in the upper left corner of the display)

b) Press the (+PRG) button 3 times until the LCD display shows Set4 and the should also be illuminated

c) Press the (OK) button, (**Ch01** or **Ch02** should display)

d) You can choose whether to set the output cycle pulse to output 1 or output 2 by scrolling between them with the (+PRG) or (-MAN) buttons

e) Press the (OK) button, should now show on the display of the unit (the blinking two digits could be any thing from 01 to 99)

f) Change the desired On time by using (+PRG) button to increase and the (- MAN) to decrease in increments of 1 second

g) Press the (OK) button to save the value into memory (now the word **OFF** is illuminated)

h) Again use the (+PRG) button to increase and the (-MAN) to decrease in increments of 1 second

i) Press the (OK) button to save the value into memory, (the LCD screen will now return to Set4 screen)

j) Press the (MAN 2/ ESC) button to exit back to the original run mode

8.) Editing Programs

** If no programs are stored than the word FREE is shown.*

a) Press and hold the (+PRG) button for 3 seconds, Set1 is what shows on the LCD display (also you will see prog in the upper left corner of the display)

b) Press the (OK) button to enter into the programming parameters, (the word **ADD** will be shown now)

c) Press the (+PRG) button, the unit's display will now show Edit

d) Press (OK) button (the time and day that Pr.00 is set for will display)

e) Press the (MAN2 / ESC) button to display the **Pr.00** (you can choose to display the program number or the program time so this step is user choice)

f) Use the (+PRG) button and the (-MAN) button to scroll to the correct program number you want to edit

g) Press and hold the (OK) button for 3 seconds to enter the desired program you want to change

h) Now follow the steps of the correct programming section that you want this device to operate in Normal Mode, Repeat Cycle Mode, Pulse Mode, etc…

9.) Deleting Programs

** To delete all programs saved in memory at once please see Reset all the Programs".*

a) Press and hold the (+PRG) button for 3 seconds, Set1 is what shows on the LCD display (also you will see **prog** in the upper left corner of the display)

b) Press the (OK) button to enter into the programming parameters (the word **ADD** will be shown now)

c) Press the (+PRG) button twice (the LCD display shows deL)

d) Press (OK) button (the time and day that Pr.00 is set for will display)

e) Press the (MAN2 / ESC) button to display the Pr.00, (you can choose to display the program number or the program time so this step is user choice)

f) Use the (+PRG) button and the (-MAN) button to scroll to the correct program number you want to delete

g) Press and hold the (OK) button for 3 seconds to delete the selected program

h) You can choose to delete another program by simply following steps F and G again or wait 45 seconds and the device will return to the deL menu

i) Press the (MAN 2 / ESC) button twice to exit back to original run mode

10.) Setting the Holiday Mode

Holiday mode can be programmed so that the unit doesn't have to be turned off, programs don't have to be changed, or even deleted during special times that you don't want the unit to be switching outputs on and off. This mode is used to keep off the outputs for the set time and date. The holiday mode will take precedence over any programmed mode. The only mode that will perform during holiday mode is the manual control mode.

a) Press and hold the (+PRG) button for 3 seconds, Set1 is what shows on the LCD display (also you will see prog in the upper left corner of the display)

b) Press (+PRG) button 4 times until Set5 is on the unit's LCD screen

c) Press (OK) button (OFF and  symbol is illuminated)

d) Press (+PRG) button (now ON and  symbol is illuminated)

e) Press the (OK) button to enter the starting year for holiday mode 2004 (once in the display should have the last to digits blinking)

f) By using the (+PRG) and the (-MAN) buttons you can change the year to your desired starting year

g) Once you have the number on the correct year press the (OK) button to save it to the memory and move to the next set up option

h) Device should have the first to digits blinking waiting for starting day over holiday mode to be entered 31

i) Again use the (+PRG) and the (-MAN) buttons to change the two digits to the correct day

j) Press (OK) button to enter the day into the memory of the unit

k) The day is still displayed on the first two digits and now the second two digits are blinking 31"12"

l) Once again by using the (+PRG) and the (-MAN) buttons you can scroll up and down to change the numeric values of the month (1-12) to set the starting month

m) Press (OK) button (Now unit's display goes back to entering a year except the word (**OFF** is now illuminated)

n) Repeat steps F through L to set the holiday mode ending year, date, and time

o) Once (OK) button is pressing to enter the holiday modes ending month the LCD display will go back to Set5

p) Press the (MAN2 / ESC) button to return to original run mode

ACCESSORIES

REPLACEMENT FILTER OPTIONS

KP3367-1 Filter Set 2, Statiflex 6000, Circulator

MAINTENANCE

⚠ WARNING

Have qualified personnel do the maintenance work. Turn the power off before working inside the machine. 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.

If a problem cannot be corrected by following the instructions, take the machine to the nearest Lincoln Electric Field Service Shop.

ELECTRIC SHOCK can kill.

- **Do not touch electrically live parts or electrode with skin or wet clothing.**
- **Insulate yourself from work and ground.**
- **Always wear dry insulating gloves**

FUMES and GASES can be dangerous.

- **Use in open, well ventilated areas or vent exhaust outside.**

MOVING PARTS can injure.

- **Do not operate with doors open or guards off.**
- **Stop before servicing.**
- **Keep away from moving parts.**

⚠ WARNING

Dismantling and disposal

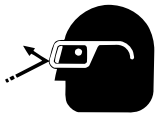
- **Only a qualified electrician may disconnect the machine or the electrical system**
- **Before dismantling it the machine must be disconnected from the power supply and from the external compressed air supply**
- **Before dismantling it, clean the equipment**
- **The dismantling area must be cleaned afterwards**
- **During dismantling work, the working area must be adequately ventilated; this can be achieved by provision of a mobile ventilation unit**
- **During dismantling work, wear appropriate personal protective equipment. We recommend half-face breathing masks to DIN EN 141/143, protection class P3**
- **The pollutants and dust, together with the dirty filter cartridges, must be properly disposed of in a professional manner in accordance with statutory instructions, using the plastic sack disposal system supplied**

⚠ ATTENTION

Maintenance should only be performed by authorized, qualified and trained persons (skilled) using appropriate work practices.

⚠ WARNING

When cleaning equipment or replacing filter use personal protection equipment (PPE) such as gloves, respirators and protective clothing to protect against overexposure to particulate. It is recommended that a vacuum cleaner or wet methods be used to clean up any loose particulate that is present in the extraction arm. It is necessary to use a vacuum cleaner with HEPA rated filtration.



⚠ WARNING

- **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.**
- **During service, maintenance and repair jobs, always use Personal Protective Equipment (PPE) to avoid injury. This also applies to persons who enter the work area during installation.**
- **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.**
- **Use sufficient climbing gear and safety guards when working on a higher level than 2 meter.**
- **Ensure the workspace is well illuminated.**

MALFUNCTIONS AND EMERGENCIES EFFECTING THE FILTER UNIT

Fire

- In the event of fire, an approved extinguisher for fire classes A, B and C should be used
- The manufacturer must be contacted

ESCAPE OF NOXIOUS SUBSTANCES OR RADIATION

- The STATIFLEX 6000-MS contains no noxious substances.
- If the filter ruptures, welding fumes can be released into the building; welding activities must be suspended and the STATIFLEX 6000-MS repaired

ROUTINE SERVICE & MAINTENANCE

To sustain optimal performance level, routine Service & Maintenance of the System is required. it is recommended to empty the Drums based on level of annual Consumable usage, Type of welding process,

Condition of Base metal & Overall type of usage & air quality extracted through the systems.

Statiflex 6000 Routine maintenance includes:

- Check & clean the Preseparator aluminium mesh filters. recommended to keep a supply of new preseperator filters to allow zero system down time during cleaning routine.
- Replace main filter catridge's if necessary
- Check for correct cleaning system air pressure at filter units.
- Check Statiflex 6000 control panel, ensure there is no Alarm status & filter cleaning system is functioning properly.

CHANGING THE DUST BAG

⚠ WARNING

The particulate matter collected may be dangerous to your health. Take necessary precautions so that you and your fellow workers do not breathe the dust and particulate. Wear a suitable respirator when disposing of the particulate.

When using the Weld fume Extraction or local exhaust Ventilation (LEV) equipment, sparks from welding, Cutting or grinding Process can cause fire with in the equipment. To minimize the potential fire, operation, service 7 maintenance guidelines for fume extraction or LEV equipment should be followed..

Check with local authorities for regulations governing the disposal of this material.

Turn off all fans before opening or inspecting the drums or filters.

Open the lever lock carefully & pull the drum using the handle underneath the filter unit (or preseparator). Tie off the opening of the bag before removing from the drum; slowly remove the bag. **SEE WARNING ABOVE.** Install a new bag, replace the drum, seal tightly. Check with local authorities for regulations governing the disposal of this material. SEE WARNINGS ABOVE.

REPLACING THE FILTER CARTRIDGES

Replace the filter cartridges when they have been damaged or when the indicator shows that the filter is clogged. The filter indicator will flash slowly and the alarm buzzer will sound if the cleaning function does not reduce the pressure drop below the set point after 240 pulses (-4 hours). This could be due to a saturated filter, Jack of compressed air, low air pressure, cleaning equipment malfunction or dirt, oil or moisture in the compressed air . Oil or moisture in the inlet airstream will also greatly reduce the life of the filter.

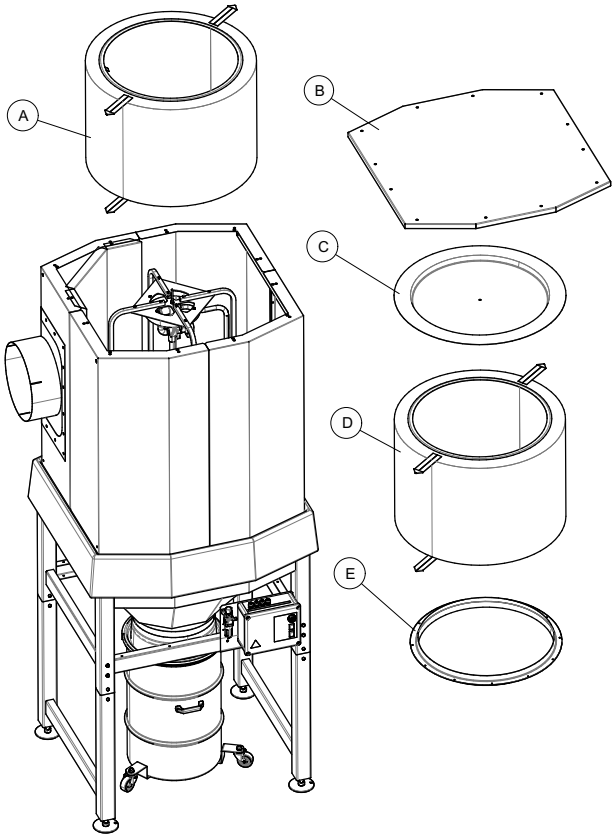
Improper maintenance of the filter unit such as operating with fully saturated main filter over extended period of time may reduce equipment life, filter efficiency & increase chance of over heating blower motors & potential fire hazard.

⚠ WARNING

If routine service & maintenance is not performed, applications & process with oils, anti spatter, tip-dip and/or moisture may cause damage to the system equipment, CFM level & may void the equipment & filter warranty.

Check with local authorities for regulations governing the disposal of this material.

1. Turn off all fans connected to the system.
2. Remove the top lid of the Statiflex 6000-MS (B) and remove the filter cover (C).
3. Remove the top filter (D) by pulling up on the two straps on the filter.
4. Remove the intermediate ring that seals the two filters together (E).
5. Remove the second filter by pulling up on the two straps (F).
6. When unpacking a new filter, notice that the filter has been treated with precoating powder. Some of this powder may have settled to the bottom of the packaging.
7. Install a new filter, the intermediate ring and a new filter on top of the intermediate ring.
8. Replace the filter cover and lid. Be sure that all components are properly seated and sealed.
9. Do not use the cleaning system during the first 10 hours of operation to allow the precoating powder to establish on the filter surface. Excess powder found in the packaging can be added to the airstream when the filters are installed.



TROUBLESHOOTING GUIDE

Service and Repair should only be performed by Lincoln Electric Factory Trained Personnel. Unauthorized repairs performed on this equipment may result in danger to the technician and machine operator and will invalidate your factory warranty. For your safety and to avoid ELECTRICAL SHOCK, please observe all safety notes and precautions detailed throughout this manual.

This Troubleshooting Guide is provided to help you locate and repair possible machine malfunctions. Simply follow the three-step procedure listed below.

Step 1. LOCATE PROBLEM (SYMPTOM).

Look under the column labeled “PROBLEM (SYMPTOMS)”. This column describes possible symptoms that the machine may exhibit. Find the listing that best describes the symptom that the machine is exhibiting.

Step 2. POSSIBLE CAUSE(S).

The second column labeled “POSSIBLE AREA(S) OF MISADJUSTMENTS” lists the obvious external possibilities that may contribute to the machine symptom.

Step 3. RECOMMENDED COURSE OF ACTION

This column provides a course of action for the Possible Areas of Misadjustment(s).

Service and Technical Support

For information about specific adjustments, maintenance or repair jobs which are not dealt with in this manual, please contact Lincoln Electric Automation Department 888-935-3878.

Make sure you have the following data on hand:

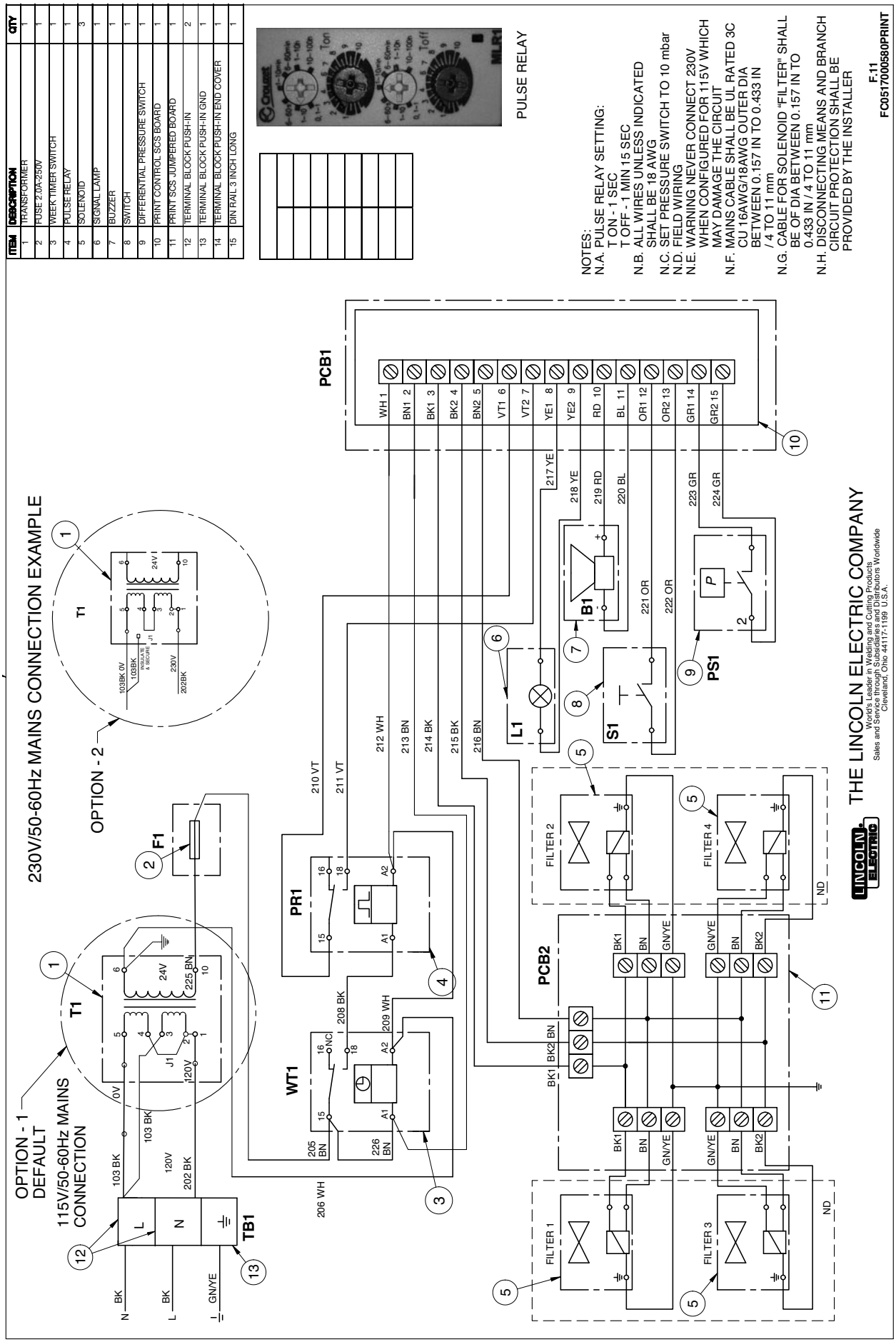
- product name
- serial number
- purchase order (number + date) for warranty verification

If for any reason you do not understand the test procedures or are unable to perform the tests/repairs safely, contact your Lincoln Authorized Service Facility for technical troubleshooting assistance before you proceed.

WWW.LINCOLNELECTRIC.COM/LOCATOR

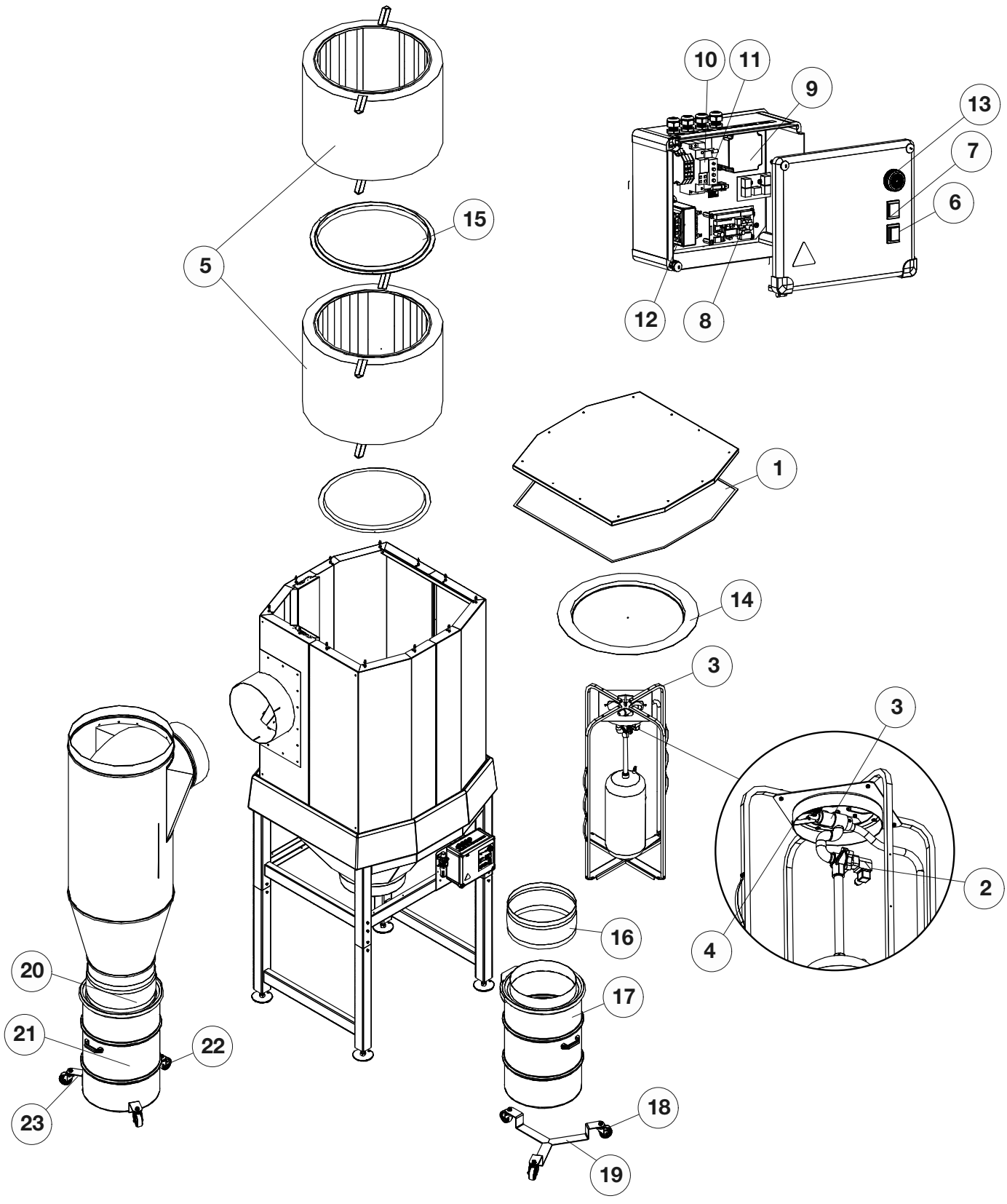
Observe all Safety Guidelines detailed throughout this manual		
PROBLEMS (SYMPTOMS)	**POSSIBLE CAUSE**	**RECOMMENDED COURSE OF ACTION**
FUNCTION PROBLEMS		
Poor suction.	Leakage.	Check hose connections and integrity
	Outlet blocked.	Remove obstructions from outlet grid.
	Air path in arm blocked.	Remove obstructions from arm.
	Filter blocked.	Replace filter.
	Too much airflow (too many fans running at one time)	Reduce airflow (use fewer fans)
	Blower fan blocked.	Clean excess fume or spatter from fan.
	Fan seal damaged.	Check or replace sealing material of fan.
Dust or smoke coming out of outlet.	Filter damaged, or not seated cor-rectly.	Replace the filter or reseat it.
Alarm buzzer sounds Note: To reset alarm, press Clean/reset button next to the indicater light.	Filter Saturated	Replace Filter
	Compressed air not connected	Connect compressed air: 75 - 90 PSI clean & cry.
	Compressed air pressure too low	Connect 75 - 90 PSI of clean, dry com-pressed air
	Damaged valve or solenoid	Replace valve-solenoid assembly
	damaged PC board, or pressure switch	Replace PC Board or pressure switch
Pressure relief valve opened on air tank.	Air Pressure too high	Regulate compressed air down to 75 - 90 PSI .
Indicator light does not shine	No power or defective light or circuit	Check circuit for voltage all the way to the light. Replace defective component. Refer to SF2400 Stationary Fan, and appropriate arm manual for more troubleshooting.

If for any reason you do not understand the test procedures or are unable to perform the tests/repairs safely, contact your Lincoln Authorized Service Facility for technical troubleshooting assistance before you proceed.
WWW.LINCOLNELECTRIC.COM/LOCATOR



ITEM	DESCRIPTION	QTY
1	TRANSFORMER	1
2	FUSE 2.0A 250V	1
3	WEEK TIMER SWITCH	1
4	PULSE RELAY	1
5	SOLENOID	3
6	SIGNAL LAMP	1
7	BUZZER	1
8	SWITCH	1
9	DIFFERENTIAL PRESSURE SWITCH	1
10	PRINT CONTROL SCS BOARD	1
11	PRINT SCS JUMPERED BOARD	1
12	TERMINAL BLOCK PUSH-IN	2
13	TERMINAL BLOCK PUSH-IN GND	1
14	TERMINAL BLOCK PUSH-IN END COVER	1
15	DIN RAIL 3 INCH LONG	1

General Assembly



STATIFLEX 6000-MS

ITEM	DESCRIPTION	PART NO.	QTY.
	Filtration Unit and controls:	L10393-2	
1	GASKET	9SS31225-10	As Req'd
2	PULSE VALVE 3/4 INCH INTEGRAL	9SFC0042000040	As Req'd
3	PISTON HOUSE ASSEMBLY	9SS31228-68	As Req'd
4	PLATE SPRING	9SFC0710030080	As Req'd
5	FILTER SET 2, STATIFLEX 6000, CIRCULATOR	KP336731	As Req'd
6	PRESSURE MOMENT SWITCH	9SFC0328290010	As Req'd
7	SIGNAL LAMP YELLOW	9SFC0324150120	As Req'd
8	PCB CONTROLLER SCS	9SFC0326701030	As Req'd
9	DIFFERENTIAL PRESSURE SWITCH	9SFC0328280020	As Req'd
10	WEEK TIMER SWITCH	9SS23385-10	As Req'd
11	RELAY PULSE/PAUSE	9SFC0328290050	As Req'd
12	TRANSFORMER	9SS31228-92	As Req'd
13	BUZZER	9SFC0360000020	As Req'd
14	FILTER COVER	9SFC0719020040	As Req'd
15	FILTER RING DOUBLE	9SFC0719020060	As Req'd
16	BUSHING DRUM 100, 6000MS	9SS23385-11	As Req'd
17	DRUM ASSEMBLY	9SS31228-170	As Req'd
18	STEM CASTOR	9SFC0805040060	As Req'd
19	SFB TROLLEY FRAME	9SFC0000101485	As Req'd
PARTS OF PRESEPERATOR			
	PRESEPERATOR ASSEMBLY	M18440-1	
20	BUSHING DRUM 100, 6000MS	9SS23385-11	As Req'd
21	DRUM ASSEMBLY	9SS31228-170	As Req'd
22	STEM CASTOR	9SFC0805040060	As Req'd
23	SFB TROLLEY FRAME	9SFC0805040060	As Req'd

			
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焊材料，並請遵守貴方的有関勞動保護規定。

이 제품에 동봉된 작업지침서를 숙지하시고 귀사의 작업자 안전수칙을 준수하시기 바랍니다.

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

CUSTOMER ASSISTANCE POLICY

The business of The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for advice or information about their use of our products. We respond to our customers based on the best information in our possession at that time. Lincoln Electric is not in a position to warrant or guarantee such advice, and assumes no liability, with respect to such information or advice. We expressly disclaim any warranty of any kind, including any warranty of fitness for any customer's particular purpose, with respect to such information or advice. As a matter of practical consideration, we also cannot assume any responsibility for updating or correcting any such information or advice once it has been given, nor does the provision of information or advice create, expand or alter any warranty with respect to the sale of our products.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.com for any updated information.

WELD FUME CONTROL EQUIPMENT

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.

THE LINCOLN ELECTRIC COMPANY
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