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STEINEL®
 PROFESSIONAL



HG 2320 E



HL 2020 E



HL 1920 E



HL 1820 S



HL 1620 S

HG 2320 E
 HL 2020 E
 HL 1920 E
 HL 1820 S
 HL 1620 S

IMPORTANT SAFETY INSTRUCTIONS

READ THESE INSTRUCTIONS

UL WARNING: Read this instruction book before using. To reduce risk of fire or electric shock, do not expose to rain or moisture. Store indoors. Double insulated. When servicing, use only identical replacement parts. When using electric tools, basic safety precautions should always be followed to reduce risk of fire, electric shock and personal injury. This hot air gun operates at 1200°F with no visual indication of temperature (no flame). Never leave device unattended. Otherwise risk of fire. The heat stream at the outlet nozzle will burn flesh. Do not turn on hot air tool with hand in front of nozzle. **DO NOT USE NEAR COMBUSTIBLE LIQUIDS. DO NOT USE FOR:** ● Heating gas engines ● Heating car batteries ● Thawing refrigerator equipment.

WARNING: Some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known (to the State of California) to cause cancer, birth defects, or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints,
- Crystalline silica from bricks and cement and other masonry products, and
- Arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

WARNING!

This tool is capable of producing temperatures up to 1200° F of flameless heat at the nozzle. **ALWAYS:**

- Direct the heat away from yourself and others.
- Prevent ignition of combustible materials on or near the workpiece.
- Prevent blockage of intake and nozzle openings.
- Keep a fully charged fire extinguisher on hand.
- Allow the nozzle and accessory tips to cool to room temperature before storage.

Cautions

1. **WARNING:** Hidden areas such as behind walls, ceilings, floors, soffit boards and other panels may contain flammable materials that could be ignited by the hot air tool when working in these locations. The ignition of these materials may not be readily apparent and could result in property damage and injury to persons. Do not use if in doubt about this hazard. When working in these locations, keep the hot air tool moving in a back-and-forth motion. Linger or pausing in one spot could ignite the panel or the material behind it.
2. This hot air tool can produce up to 1200° F of flameless heat at the nozzle. Do not direct airstream at clothing, hair or other body parts. Do not use as a hair dryer.
3. Do not use near flammable liquids or in an explosive environment (fumes, gases or dust). Remove materials or debris, that may become ignited from work area.
4. Always hold tool by plastic enclosure. The metal nozzle requires approximately 20 minutes to cool to where it can be touched. Do not touch nozzle or accessory tips until cool.
5. Do not store tool until nozzle has cooled to room temperature. Place tool in a clear area away from combustible materials while cooling.
6. Do not cut off airflow by placing nozzle too close to work piece. Keep intake vents clean and clear of obstructions.
7. Place tool on a level surface when tool is not hand held. Place cord in a position that won't cause tipping.
8. Do not leave tool unattended while running or cooling down. Otherwise risk of fire.
9. Keep a fully charged fire extinguisher nearby.
10. Do not direct airflow directly on glass.
11. Shield materials around the heated area to prevent damage or fire.
12. Use only with 120 V AC voltage.
13. Do not use in wet conditions.
14. Not to be used by children. This is not a toy and should be respected.

15. Do not use in bath or over water.
16. Safety glasses should be worn when using this tool.
17. It is recommended that leather gloves be worn when using a hot air tool.
18. Always unplug after use.
19. **WARNING:** Extreme care should be taken when stripping paint. The peelings, residue and vapors of paint may contain lead, which is poisonous. Any pre-1977 paint may contain lead and paint applied to homes prior to 1950 is likely to contain lead. Once deposited on surfaces, hand to mouth contact can result in the ingestion of lead. Exposure to even low levels of lead can cause irreversible brain and nervous system damage; young and unborn children are particularly vulnerable. Before beginning any paint removal process you should determine whether the paint you are removing contains lead. This can be done by your local health department or by a professional who uses a paint analyzer to check the lead content of the paint to be removed. **LEAD-BASED PAINT SHOULD ONLY BE REMOVED BY A PROFESSIONAL AND SHOULD NOT BE REMOVED USING A HOT AIR TOOL.**
20. Do not allow dust, debris or other contamination to enter the heat blower air intake. They may ignite or cause damage to the tool.

Persons removing materials should follow these guidelines.


1. Move the work piece outdoors. If this is not possible, keep the work area well ventilated. Open the windows and put an exhaust fan in one of them. Be sure the fan is moving the air from inside to outside.
2. Remove or cover any carpets, rugs, furniture, clothing, cooking utensils and air ducts.
3. Place drop cloths in the work area to catch any residue. Wear protective clothing such as extra work shirts, overalls and hats.
4. Work in one room at a time. Furnishings should be removed or placed in the center of the room and covered. Work areas should be sealed off from the rest of the dwelling by sealing doorways with drop cloths.
5. Children, pregnant or potentially pregnant women and nursing mothers should not be present in the work area until the work is done and all clean up is complete.
6. Wear a dust respirator mask or a dual filter (dust and fume) respirator mask which has been approved by the Occupational Safety and Health Administration (OSHA), the National Institute of Safety and Health (NIOSH), or the United States Bureau of Mines. These masks and replaceable filters are readily available at major hardware stores. Be sure the mask fits. Beards and facial hair may keep masks from sealing properly. Change filters often. **DISPOSABLE PAPER MASKS ARE NOT ADEQUATE.**
7. Use caution when operating the hot air tool. Keep the hot air tool moving as excessive heat will generate fumes which can be inhaled by the operator.
8. Keep food and drink out of the work area. Wash hands, arms and face and rinse mouth before eating or drinking. Do not smoke or chew gum or tobacco in the work area.
9. Clean up all removed residue and dust by wet mopping the floors. Use a wet cloth to clean all walls, sills and any other surface where residue or dust is clinging. **DO NOT SWEEP, DRY DUST OR VACUUM.** Use a high phosphate detergent or trisodium phosphate (TSP) to wash and mop areas.
10. At the end of each work session put the residue and debris in a double plastic bag, close it with tape or twist ties, and dispose of properly.
11. Remove protective clothing and work shoes in the work area to avoid carrying dust into the rest of the dwelling. Wash work clothes separately. Wipe shoes off with a wet rag that is then washed with the work clothes. Wash hair and body thoroughly with soap and water.

SAVE THESE INSTRUCTIONS

Thank you

Thank you for choosing a STEINEL hot air tool. This tool can be used for completing a wide range of jobs safely and reliably, such as soldering, welding PVC, shaping, drying, shrink-fitting, stripping paint, etc. All STEINEL tools are manufactured to the highest standards and undergo a strict process of quality control. Used in the proper manner, this hot air tool will give you lasting satisfaction.

Double Insulated Tools

Tools marked with the words "Double Insulated" are equipped with a two prong plug. These tools have a special insulation system that complies with applicable UL standards  **UL** USE LISTED. They do not require grounding. "Double Insulated" tools, like this one, have two prong cords and can use either a two or three prong extension cord.

This appliance has a polarized plug (one blade is wider than the other). To reduce the risk of electric shock, this plug is intended to fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician. Do not modify the plug in any way.

Extension Cords

As the distance from the supply outlet increases, heavier gauge extension cords are required. The use of extension cords of inadequate size wire causes a serious drop in voltage and loss of power. Protect the cord from damage. Keep cords away from excessive heat, sharp edges and damp or wet areas. Repair or replace damaged extension cords before using.

Ext. Cord Length	Wire Size
40 Ft.	16
85 Ft.	14
100 Ft.	12
170 Ft.	10
270 Ft.	8
400 Ft.	6
650 Ft.	4

Conversion °C to °F

°C	= °F
100	212
200	392
300	572
400	752
500	932
600	1112
700	1292

Conversion °F to °C

°F	= °C
100	38
200	93
300	149
400	204
500	260
600	316
700	371
800	427
900	482
1000	538
1100	593
1200	649

For Your Safety

(HG 2320 E / HL 2020 E / HL 1920 E / HL 1820 S / HL 1620 S)

First time use, a small quantity of smoke may occur when the tool is used for the first time. This smoke is caused by binding agents released from the heater's insulating film during the first time of use. To let the smoke escape quickly, the tool should be set down on its standing surface. The area you are working in should be well ventilated when using the tool for the first time. Any smoke coming out of the tool is not harmful!

Residual heat indicator (HL 2320 E / HG 2020 E)

The residual heat indicator serves as a visual warning to prevent injury from direct contact with the hot nozzle outlet by flashing until the temperature at the nozzle outlet has fallen below 140 degrees F at room temperature. It begins working after the tool has been in use for 90 seconds and also works when the tool is unplugged. No indication will be shown if the tool has been in operation for less than 90 seconds. Responsibility always rests with the user and care must be taken at all times when handling hot air tools.

These hot air tools are protected from overheating:

The thermal cut-out completely shuts down the tool if it is overloaded.

Tool description - Operation

Please note: The distance from the object you are working on depends on material and intended method of working. Always try out the airflow and temperature on a test piece first. Using the attachable accessory nozzles (see accessories page on the cover) the flow of hot air can be controlled with maximum precision.

Take care when changing hot nozzles! When using the hot air tool in the self-resting position, make sure it is standing on a stable, non-slip and clean surface.

HL 1620 S

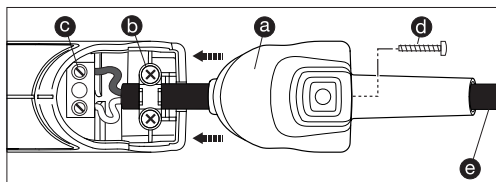
Technical Specifications HL 1620 S	
Item No.	110023455
2 Stage Switch	575 °F (302°C) / 8 cfm 950 °F (510°C) / 13 cfm
Output	1300 watts
Voltage	120 VAC / 60 Hz
Amps	10.8
Power Cord	Industrial grade rubber, length: 6 ft
Nozzle Diameter	1.30" (33.02 mm)
Dimensions	9.92" x 3.37" x 7.87" (l x w x h)
Net Weight	1.65 lbs (26.4 oz)
Single Sell Pack	Dimensions: 10.20" x 3.54" x 9.3" Weight: 2.06 lbs (32.98 oz)
Warranty	One year limited



The tool is switched on and off at the two-stage switch on the back of the grip handle. Airflow and temperature can be adjusted between 2 settings. Stage 1 reaches 575 °F at an airflow of 8 cfm, stage 2 reaches 950 °F at 13 cfm.

Changing the power cord

Important! Disconnect tool from power supply.



If the power cord is damaged, it can easily be changed without opening the housing.

1. Undo screw **(d)** and pull off cover cap **(a)**.
2. Release cable grip **(b)**.
3. Undo mains terminals **(c)**.
4. Pull out cable **(e)**.
5. Insert new cable and secure in reverse order (Firmly screw down mains terminals etc.).

Applications

Shrink tubing on cables:

The shrink tubing is slipped over the section you want to insulate and heated with hot air. The tubing shrinks by approx. 50% in diameter to give a sealed union. Shrinking is particularly fast and even using reflector nozzles. Sealing and stabilizing cable breaks, insulating soldered joints, gathering cable runs, sheathing terminal blocks.

Forming PVC:

Sheeting, piping or ski boots can be softened and formed with hot air.

Thawing:

Water pipes, frozen door locks, steps. Gently thaws and dries all in one go.

Soldering:

First, clean metal parts you want to join. Then, using hot air, heat the point you want to solder and offer up the soldering wire. Use flux or a soldering wire with a flux core to prevent oxide forming.

Welding and joining plastic:

All parts being welded must be of the same plastic material. Use an appropriate welding rod.

Joining plastic sheeting:

The sheets are overlapped and welded together. A slit nozzle is used to direct hot air under the overlap, then the two sheets are firmly pressed together with a feed roller.

Also possible: **Repairing PVC tarpaulins** by overlap welding with a slit nozzle.

Shaping:

Ski boots and sports shoes can be shaped for a perfect fit.

Desoldering:

Electronic components are detached quickly and neatly from circuit boards with a reduction nozzle.

Welding sheeting:

The sheets are overlapped and welded together. A slit nozzle is used to direct hot air under the overlap, then the two sheets are firmly pressed together with a feed roller.

Also possible: **Repairing PVC tarpaulins** by overlap welding with a slit nozzle.

Plastic types:		
Material	Application types	Distinguishing characteristics
Rigid PVC	Piping, fittings, boards, building profiles, technical molded components, etc. Welding temperature 550 - 650 °F (290 - 345 °C)	Incineration test: carbonizes in the flame and extinguishes on its own Smoke odor: pungent, of hydrochloric acid Drop test: crashing
Plasticized PVC	Floor coverings, wallpaper, hoses, sheets, tools, etc. Welding temperature 550 - 650 °F (290 - 345 °C)	Incineration test: smoking, yellowish-green flame Smoke odor: pungent, of hydrochloric acid Drop test: silent
Plasticized PE (LDPE) Polyethylene	Domestic and electronic items, toys, bottles, etc. Welding temperature 450 - 550 °F (230 - 290 °C)	Incineration test: light, yellow flame, drops continue to burn Smoke odor: resembles an extinguished candle Drop test: dull
Hard PE (HDPE) Polyethylene	Baths, baskets, canisters, insulating materials, piping, cellar shafts, transport containers, waste bins, etc. Welding temperature 550 - 650 °F (290 - 345 °C)	Incineration test: light, yellow flame, drops continue to burn Smoke odor: resembles an extinguished candle Drop test: crashing
PP Polypropylene	HT drainpipes, plastic chairs, packaging, car components, equipment housing, technical moldings, battery boxes, etc. Welding temperature 450 - 550 °F (230 - 290 °C)	Incineration test: light flame with a blue core, drops continue to burn Smoke odor: pungent odor of paraffin Drop test: crashing
ABS	Car components, equipment housing, suitcases Welding temperature 625 - 725 °F (330 - 385 °C)	Incineration test: black, fluffy smoke Smoke odor: sweetish Drop test: crashing

Accessories

Your retailer has a wide range of accessories for you to choose from.

1 Window nozzle 75 mm	Part No. 110048749	16 Plastic welding rod rigid PVC	Part No. 110048754
2 Window nozzle 50 mm	Part No. 110048750	17 Plastic welding rod HDPE	Part No. 110048753
3 Spreader nozzle 75 mm	Part No. 110048749	18 Plastic welding rod PP	Part No. 110048757
4 Spreader nozzle 50 mm	Part No. 110048643	19 Plastic welding rod ABS	Part No. 110048756
5 Reflector nozzle 39 mm	Part No. 110048645	20 Thermo flex welding rod	Part No. 07352
6 Lap Welding Nozzle 20 mm	Part No. 110048649	21 Wire mesh	Part No. 07371
7 Reduction nozzle 14 mm	Part No. 110048647	22 Welding iron	Part No. 109428400
8 Wire protection tube	Part No. 07404	23 Temperature guard	Part No. 07666
9 Silicone seam roller	Part No. 01250	24 Fine dust particle filter	Part No. 07821
10 Reduction nozzle 9 mm	Part No. 110048646	25 Temperature detection device HL-Scan	Part No. 110048403
11 Reflector nozzle 9 mm	Part No. 110048646	26 Flexible stand VACUUM	Part No. 01435
12 Reflector nozzle 14 mm	Part No. 110048752	27 Flexible stand MAGNETIC	Part No. 01445
13 Reflector nozzle with sieve	Part No. 01029	28 Case	Part No. 110036523
14 Pinpoint reducer	Part No. 07082	29 xx20 Plastic Ring/hanger	Part No. 110045172
15 Welding nozzle	Part No. 110048648	30 LED Light	Part No. 110047650

HG 2320 E / HL 2020 E / HL 1920 E / HL 1820 S / HL 1620 S (1-8)



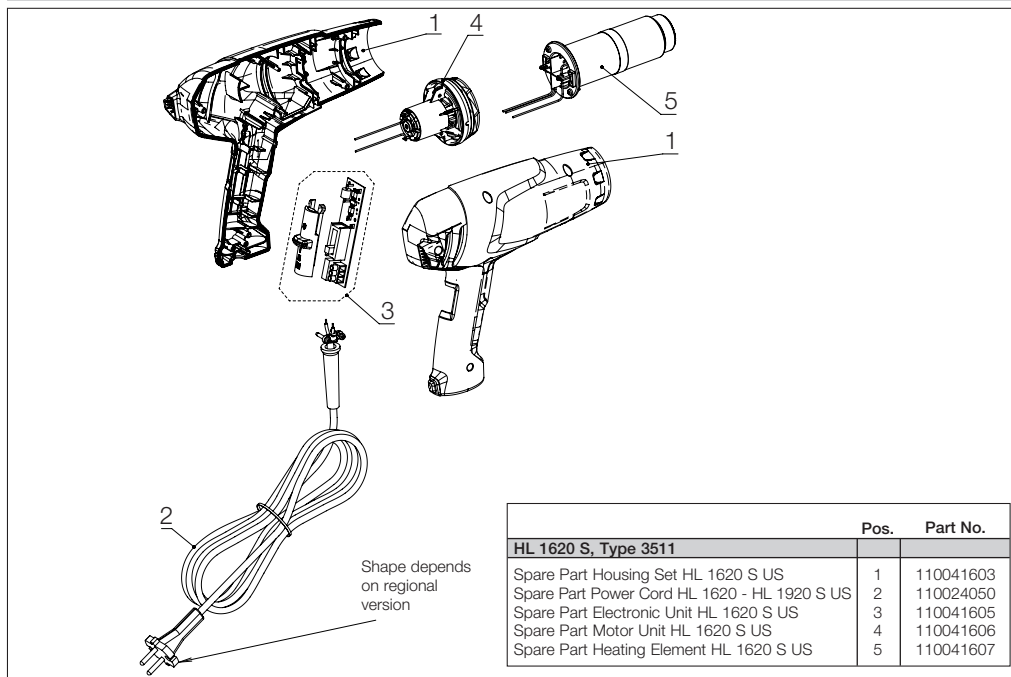
HG 2320 E / HL 2020 E / HL 1920 E (only)



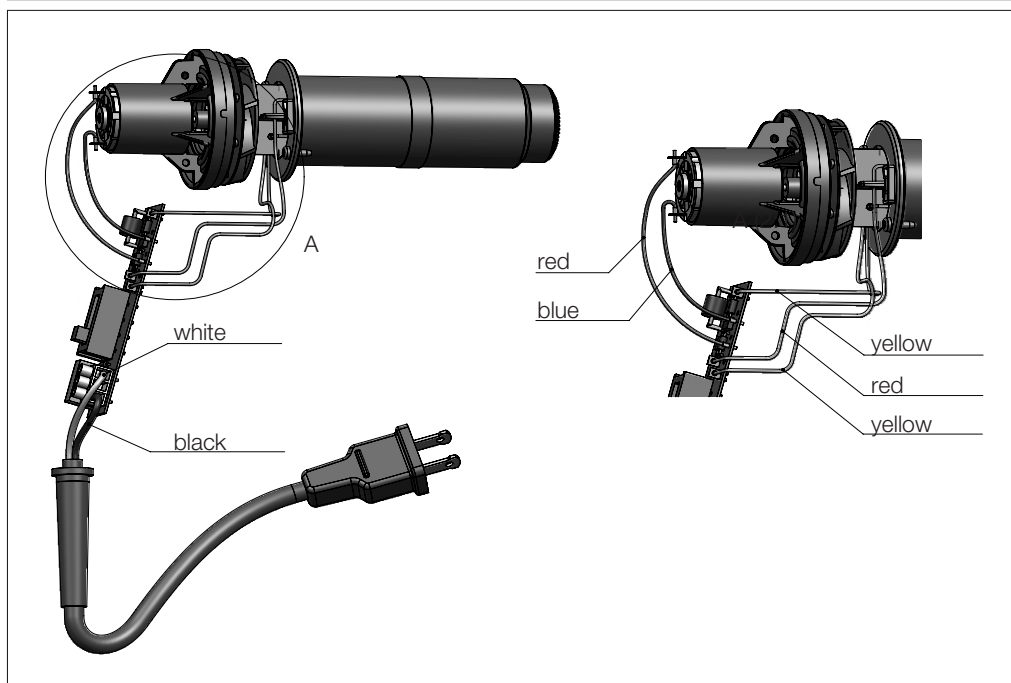
Special Accessories



Spare Parts List HL 1620 S



Wiring Diagram HL 1620 S



Limited Warranty

STEINEL warrants its hot air tools, if properly operated and maintained, and used under normal conditions, for a period of one (1) year from the date of purchase. Warranty does not apply to wearable items such as heating elements which require periodic replacement. Specifically **EXCLUDED** from warranty are tools that have been subject to abuse, tools that have been opened or repaired by anyone other than STEINEL, tools that have been modified in any way or mounted onto machinery/equipment, and tools that have been put into continuous operation. These are hand held power tools and are intended for use as such. Any other use voids STEINEL's warranty.

Warranty and Repair Procedures

In the event of product failure, please call STEINEL customer service directly at (800) 852-4343. We will attempt to troubleshoot the difficulty via phone.

If warranty work or other repair appears necessary, we will issue an RGA# and we will supply you with a shipping address (postage paid by the customer), with the RGA# clearly marked, and accompanied by a brief description of the difficulty as well as your original dated sales receipt phone number and return address.

When received, STEINEL will diagnose the problem and determine if it is covered under warranty. If we determine that it is covered by warranty, we will repair or replace the defective tool, at our option, and return it to the customer (postage paid by STEINEL). If we determine that the tool is not defective and/or that it is not covered by warranty, we will contact the customer to discuss options prior to performing any repair work not covered under warranty.

All non-warranty repair work is billed at standard rates and will be quoted prior to repair.

Consequential Damages

The company shall not be liable for any incidental or consequential damages arising from the use of the Product by the Purchaser, the breach of any warranties, the failure to deliver, delay in delivery, delivery in non-conforming condition, or for any other breach of contract or duty between the Company and the Purchaser.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Disclaimers of warranties

The warranties contained herein are expressly in lieu of any other expressed or implied warranties, or any other obligation on the part of the Company. Any implied warranty of merchantability or fitness for a particular purpose shall expire one (1) year after the date the product is purchased by the original end-user Purchaser. Any models, drawings, plans, specifications, affirmations of fact, promises, or other communications by the Company with reference to the performance of the product are solely for the convenience of the Purchaser and shall not in any way modify the expressed warranties and disclaimers set forth herein. The Purchaser acknowledges it is purchasing the Product solely on the basis of the commitments of the Company as expressly set forth herein. No agents or other parties are authorized to make any warranties on behalf of the Company or to assume for the Company any other liability in connection with the Product. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Limitation of actions

Any action resulting from the breach of any warranty contained herein by the Company must be commenced within one (1) year after the cause of action accrues. In no event shall the Company's total liability for any or all breaches of any warranty exceed the actual purchase price of the Product.

Other rights

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Steinel America Inc.

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FUNCTIONAL
12 month
WARRANTY

CONSIGNES DE SÉCURITÉ IMPORTANTES LIRE ATTENTIVEMENT CES INSTRUCTIONS

AVERTISSEMENT UL : lisez ces instructions avant toute utilisation. Pour réduire les risques d'incendie ou de chocs électriques, n'exposez pas ces outils à la pluie ou à l'humidité. Entrez-les à l'intérieur. Double isolation. Pour toute réparation, utilisez exclusivement des pièces de rechange identiques aux pièces d'origine. Lors de l'utilisation d'outils électriques, observez toujours les consignes de sécurité de base afin de réduire le risque d'incendie, d'électrocution et de blessures. Ce pistolet à air chaud fonctionne à une température de 1200 °F (649 °C) sans aucune indication visuelle de température (pas de flamme). Ne laissez jamais le pistolet sans surveillance. Sinon, risque d'incendie. Le filet de chaleur au niveau de la buse de sortie brûle la chair. Ne mettez pas le pistolet à air chaud en marche avec la main devant la buse. **NE L'UTILISEZ PAS À PROXIMITÉ DE LIQUIDES INFLAMMABLES. NE L'UTILISEZ PAS POUR CE QUI SUIT :** ● Réchauffer les moteurs à gaz ● Réchauffer les batteries de voitures ● Dégivrer l'équipement de réfrigérateur.

AVERTISSEMENT : certaines poussières générées par les travaux de ponçage, sciage, meulage, perçage et autres activités de construction contiennent des produits chimiques connus (par l'état de Californie) pour causer le cancer, des malformations congénitales ou des lésions de l'appareil reproducteur. Quelques exemples de ces produits chimiques :

- Plomb provenant de peintures à base de plomb,
- Silice cristalline provenant de briques et de ciment et d'autres produits de maçonnerie et
- Arsenic et chrome provenant de bois traité chimiquement.

Le risque présenté par l'exposition à ces produits varie en fonction de la fréquence de ce type de travail. Pour réduire l'exposition à ces produits chimiques : travaillez dans un endroit bien aéré et utilisez des équipements de sécurité agréés tels que masques antipoussières spécialement conçus pour filtrer les particules microscopiques.

AVERTISSEMENT !

Cet outil est capable de produire des températures pouvant atteindre 1200 °F (649 °C) de chaleur sans flamme au niveau de la buse. **TOUJOURS :**

- Dirigez la chaleur loin de vous et des autres.
- Évitez l'inflammation de matériaux combustibles sur ou près de la pièce à travailler.
- Évitez le blocage des orifices d'aération et des buses.
- Gardez à portée de main un extincteur complètement chargé.
- Laissez le temps à la buse et aux embouts de refroidir à la température ambiante avant de les ranger.

Précautions

1. **AVERTISSEMENT :** les zones cachées comme par exemple derrière les murs, les plafonds, les planchers, les panneaux de soffite et les autres panneaux peuvent contenir des matériaux combustibles susceptibles d'être enflammés par le pistolet à air chaud lorsqu'on travaille dans ces environnements. L'inflammation de ces matériaux peut ne pas être d'emblée apparente et pourrait avoir pour conséquence des dommages matériels et des blessures. N'utilisez pas l'outil si vous avez des doutes quant à ce risque. Lorsque vous travaillez dans ces environnements, maintenez le pistolet à air chaud en mouvement vers l'arrière et vers l'avant. Le fait de s'attarder ou de marquer un temps d'arrêt en un point donné peut provoquer l'inflammation du panneau ou du matériau situé derrière celui-ci.
2. Ce pistolet à air chaud peut produire au niveau de sa buse une chaleur sans flamme dont la température peut atteindre 1200 °F (649 °C). Ne dirigez pas le flux d'air vers les vêtements, les cheveux ou une quelconque partie du corps. Ne l'utilisez pas comme sèche-cheveux.
3. N'utilisez pas à proximité de liquides inflammables ou dans un environnement explosif (fumées, gaz ou poussières). Éliminez les matériaux ou débris susceptibles de s'enflammer sur la surface de travail.
4. Tenez toujours l'outil par le boîtier en plastique. Laissez la buse métallique refroidir pendant environ 20 minutes avant de pouvoir la toucher. Ne touchez pas la buse ou les embouts avant qu'elle/ils n'ai(en)t refroidi.
5. Ne rangez pas l'outil tant que la buse n'a pas refroidi à la température ambiante. Pendant son refroidissement, placez l'outil dans une zone dégagée dépourvue de tout matériau inflammable.
6. Ne coupez pas le flux d'air en plaçant la buse trop près de la pièce à travailler. Maintenez propres les ouvertures d'aération et empêchez leur obstruction.
7. Placez l'outil sur une surface plane lorsque vous ne le tenez pas en main. Placez le cordon dans une position qui ne le fera pas basculer.
8. Ne laissez pas l'outil sans surveillance lorsqu'il est en train de fonctionner ou de refroidir. Sinon, risque d'incendie.