



905 CONVENTIONAL SPRAY GUN

OPERATING INSTRUCTIONS
& SERVICE MANUAL



Important Safety Instructions

Read all warnings and instructions in this manual.

Do not proceed until you fully understand its contents

These **WARNINGS** are included for the health and safety of the operator and those in the immediate vicinity.

Save these instructions.

Storm Machinery

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PRESSURE FEED SPRAY GUN

The following instructions provide the necessary information for the proper maintenance of the Airpro Std Pressure feed spray gun. Please read and understand all the information in this document in order to get the maximum performance from your new 905-P Pressure spray gun.

The 905-P spray gun is the result of quality engineering and development activity. The result is an ergonomic product with reduced triggering effort and fine atomization. The specification table details the operating parameters of the gun.

The 905 spray gun should be operated under the safety directions outlined in this literature. Your safety and the safety of others depend on your thorough understanding of the material contained herein.

If you have any questions or do not understand the content in this literature, call your nearest service representative.

SPECIFICATIONS

Max. Air Pressure:	90psi/6bar
Gun Body:	Cast Aluminum
Fluid Path:	Stainless Steel
Fluid Nozzle:	Stainless Steel
Fluid Needle:	Stainless Steel
Fluid Inlet Size:	3/8" NPS(M)
Air Inlet Size;	1/4" NPS(M)
Gun Weight:	1.34 lbs. (610 g)
905-P	@45 psi 12 cfm
Air Consumption:	@90 psi 15 cfm

! WARNING

Hazards or unsafe practices which could result in severe personal injury, death or substantial property damage.

! CAUTION

Hazards or unsafe practices which could result in minor personal injury, product or property damage.

NOTE

Important installation, operation or maintenance information.

! WARNING

Read the following warnings before using this equipment.



READ THE MANUAL

Before operating finishing equipment, read and understand all safety, operation and maintenance information provided in the operation manual.



OPERATOR TRAINING

All personnel must be trained before operating finishing equipment.



EQUIPMENT MISUSE HAZARD

Equipment misuse can cause the equipment to rupture, malfunction, or start unexpectedly and result in serious injury.



LOCK OUT / TAG-OUT

Failure to de-energize, disconnect, lock out and tag-out all power sources before performing equipment maintenance could cause serious injury or death.



AUTOMATIC EQUIPMENT

Automatic equipment may start suddenly without warning.



PRESSURE RELIEF PROCEDURE

Always follow the pressure relief procedure in the equipment instruction manual.



KEEP EQUIPMENT GUARDS IN PLACE

Do not operate the equipment if the safety devices have been removed.



KNOW WHERE AND HOW TO SHUT OFF THE EQUIPMENT IN CASE OF AN EMERGENCY



WEAR SAFETY GLASSES

Failure to wear safety glasses with side shields could result in serious eye injury or blindness.



INSPECT THE EQUIPMENT DAILY

Inspect the equipment for worn or broken parts on a daily basis. Do not operate the equipment if you are uncertain about its condition.



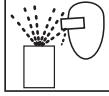
NEVER MODIFY THE EQUIPMENT

Do not modify the equipment unless the manufacturer provides written approval.



NOISE HAZARD

You may be injured by loud noise. Hearing protection may be required when using this equipment.



PROJECTILE HAZARD

You may be injured by venting liquids or gases that are released under pressure, or flying debris.

Cumulative Trauma Disorders (CTD's) CTD's, or musculoskeletal disorders, involve damage to the hand, involve loss of manual dexterity, and nonspecific pain the hands, wrists, elbows, shoulders, neck and back. Carpal tunnel syndrome and tendinitis (such as tennis elbow or rotor cuff syndrome) are examples of CTD's. CTD's can also be caused by such activities as sewing, golf, tennis and bowling, to name a few. Pain, tingling, or numbness in the shoulder, forearm, wrist, hands or fingers, especially during the night, may be early symptoms of a CTD. Do not ignore them. Should you experience any such symptoms, see a physician immediately. Other early symptoms may include vague discomfort in the in the arm. Ignoring early symptoms and continued repetitive use of the arm, wrist and hand can lead to serious disability.

IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PROVIDE THIS INFORMATION TO THE OPERATOR OF THE EQUIPMENT.

CA PROP
65

PROP 65 WARNING

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.



PINCH POINT HAZARD

Moving parts can crush and cut. Pinch points are basically any areas where there are moving parts.



STATIC CHARGE

Fluid may develop a static charge that must be dissipated through proper grounding of the equipment, objects to be sprayed and all other electrically conductive objects in the dispensing area. Improper grounding or sparks can cause a hazardous condition and result in fire, explosion or electric shock and other serious injury.



WEAR RESPIRATOR

Toxic fumes can cause serious injury or death if inhaled. Wear a respirator as recommended by the fluid and solvent manufacturer's Material Safety Data Sheet.



TOXIC FLUID & FUMES

Hazardous fluid or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, inhaled, injected or swallowed. LEARN and KNOW the specific hazards or the fluids you are using. Follow the requirements of the Material Safety Data Sheet supplied by your coating material manufacturer.



FIRE AND EXPLOSION HAZARD

Improper equipment grounding, poor ventilation, open flame or sparks can cause a hazardous condition and result in fire or explosion and serious injury. Halogenated hydrocarbon solvents - for example; methylene chloride and 1, 1, 1 - Trichloroethane are not chemically compatible with the aluminum that might be used in many system components. The chemical reaction caused by these solvents reacting with aluminum can become violent and lead to an equipment explosion.



MEDICAL ALERT

Any injury caused by high pressure liquid can be serious. If you are injured or even suspect an injury:

- Go to an emergency room immediately.
- Tell the doctor you suspect an injection injury.
- Show the doctor this medical information or the medical alert card provided with your airless spray equipment.
- Tell the doctor what kind of fluid you were spraying or dispensing.



GET IMMEDIATE MEDICAL ATTENTION

To prevent contact with the fluid, please note the following:

- Never point the gun/valve at anyone or any part of the body.
- Never put hand or fingers over the spray tip.
- Never attempt to stop or deflect fluid leaks with your hand, body, glove or rag.
- Always have the tip guard on the spray gun before spraying.
- Always ensure that the gun trigger safety operates before spraying.

PRO 65 WARNING

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TROUBLESHOOTING

CONDITION	CAUSE	CORRECTION
Heavy top or bottom pattern	 Horn holes plugged. Obstruction on top or bottom of fluid tip. Cap and/or tip seat dirty.	Clean. Ream with non-metallic point. Clean. Clean.
Heavy right or left side pattern	 Left or right side horn holes plugged. Dirt on left or right side of fluid tip.	Clean. Ream with non-metallic point. Clean.
	Remedies for the top-heavy, bottom-heavy, right-heavy, and left-heavy patterns: 1. Determine if the obstruction is on the air cap or the fluid tip. Do this by making a test spray pattern. Then, rotate the cap one-half turn and spray another pattern. If the defect is inverted, obstruction is on the air cap. Clean the air cap as previously instructed. 2. If the defect is not inverted, it is on the fluid tip. Check for a fine burr on the edge of the fluid tip. Remove with #600 wet or dry sand paper. or replace fluid tip 3. Check for dried paint just inside the opening; remove by washing with solvent.	
Heavy center pattern	 Fluid flow too high for atomization air. (Pressure Feed) Material flow exceeds air cap's capacity. Spreader adjustment valve set too low. Atomizing pressure too low. Material too thick.	Balance air pressure and fluid flow. Increase spray pattern width with spreader adjustment valve. Thin or lower fluid flow. Adjust. Increase pressure. Thin to proper consistency.
Split spray pattern	 Atomization air pressure too high. Fluid flow too low. Spreader adjusting valve set too high.	Reduce air pressure at compressor or gun. Increase fluid flow (increases gun handling speed). Adjust.
Jerky or fluttering spray	 *Loose or damaged fluid tip/seat. Material level too low. Container tipped too far. Obstruction in fluid passage. Dry or loose fluid needle packing nut. Loose or broken fluid tube or fluid inlet nipple.	Tighten or replace. Refill. Hold more upright. Backflush with solvent. Lubricate or tighten. Tighten or replace.
Unable to get round spray	Spreader adjustment screw not seating properly. Air cap retaining ring loose.	Clean or replace. Tighten.
Will not spray	No air pressure at gun. Fluid needle adjusting screw not open enough. Fluid too heavy for gravity feed. Fluid pressure too low.	Check air supply and air lines, blow out gun air passages. Open fluid needle adjusting screw. Thin material and/or change to larger tip size. Increase fluid pressure at tank.
Runs and sags	Too much material flow. Material too thin. Gun tilted on an angle or gun motion too slow.	Adjust gun or reduce fluid pressure. Mix properly or apply light coats. Hold gun at right angle to work and adapt to proper gun technique.
Starved spray pattern	Inadequate material flow. Low atomization air pressure (suction feed).	Back fluid adjusting screw out to first thread, or increase fluid pressure at tank. Increase air pressure and rebalance gun.
Excessive overspray	Too much atomization air pressure. Gun too far from work surface. Improper stroking (arcing, gun motion too fast).	Reduce pressure. Adjust to proper distance. Move at moderate pace, parallel to work surface.
Excessive fog	Too much or too fast-drying thinner. Too much atomization air pressure.	Remix properly. Reduce pressure.
Dry spray	Air pressure too high. Gun tip too far from work surface. Gun motion too fast. Gun out of adjustment.	Reduce air pressure. Adjust to proper distance. Slow down. Adjust.
Fluid leaking from packing nut	Packing nut loose. Packing worn or dry.	Tighten, do not bind needle. Replace or lubricate.
Fluid leaking or dripping from front of gun	Packing nut too tight. Dry packing. Fluid tip or needle worn or damaged. Foreign matter in tip. Fluid needle spring broken. Wrong size needle or tip.	Adjust. Lubricate. Replace tip and needle with lapped sets. Clean. Replace. Replace.

*Most common problems.

OPERATION AND MAINTENANCE FOR 905 SPRAY GUN

Your new 905 spray gun is exceptionally rugged in construction and is built to stand up under hard, continuous use. However, like any other fine precision instrument, its most efficient operation depends on a knowledge of its construction, operation and maintenance. Properly handled and cared for, it will produce beautiful, uniform finishing results long after other spray guns have worn out.

SET-UP FOR SPRAYING

Connecting Gun To Air Hose

Air should be supplied by a suitable length of 5/16" or larger diameter air hose fitted with a 1/4" NPS(f) connection at gun end. For hose lengths over 50', use 3/8" diameter hose.

SPRAY GUN CLEANING INSTRUCTIONS

In certain states it is now against the law to spray solvents containing Volatile Organic Compounds (VOC)'s into the atmosphere when cleaning a spray gun.

In order to comply with these air quality laws Storm recommends one of the following two methods to clean your spray finishing equipment:

1. Spray solvent through the gun into a closed system. An enclosed unit or spray gun cleaning station condenses solvent vapors back into liquid form which prevents escape of VOC's into the atmosphere.
2. Place spray gun in a washer type cleaner. This system must totally enclose the spray gun, cups, nozzles and other parts during washing, rinsing and draining cycles. This type of unit must be able to flush solvent through the gun without releasing any VOC vapors into the atmosphere.

Additionally, open containers for storage or disposal of solvent or solvent containing cloth or paper used for surface preparation and clean-up may not be used. All containers shall be nonabsorbent.

Pointers On Cleaning

When used with pressure pot, relieve pressure in the pot. Then unscrew, empty and carefully rinse pot out with thinners. Place clean thinners in the pot and spray this through the gun until it is clean. Blow air through gun to dry it.

CAUTION

All parts on a spray gun should be screwed in hand tight at first; this will avoid the possibility of cross threading the parts. If the parts cannot be turned by hand easily, make sure you have the correct parts, unscrew, realign, and try again. NEVER use undue force in mating parts.

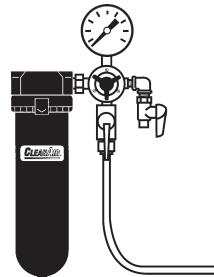
AIR PRESSURE

Atomizing pressure must be set properly to allow for the drop in air pressure between the regulator and the spray gun.

Separator filter is important.

Achieving a fine spray finish without the use of a good separator filter is virtually impossible

A regulator / separator filter serves a double purpose. It eliminates blistering and spotting by keeping air free of oil and water, and it gives precise air pressure control at the gun.



AIRPRO 905 CONVENTIONAL FEED SPRAY GUN

SPRAY TECHNIQUE

The first requirement for a good resultant finish is the proper handling of the gun. The gun should be held perpendicular to the surface being covered and moved parallel with it. The stroke should be started before the trigger is pulled and the trigger should be released before the stroke is ended. This gives accurate control of the gun and fluid.

The distance between gun and surface should be 8 to 10 inches depending on fluid and atomizing pressure. The fluid deposited should always be even and wet. Lap each stroke over the preceding stroke to obtain a uniform finish. Use 50% overlap.

NOTE

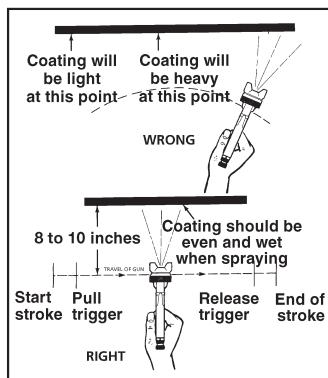
To reduce overspray and obtain maximum efficiency always spray with the lowest possible atomizing air pressure.

GENERAL SPRAY INSTRUCTIONS

Strain material thru 60 or 90 mesh screen. To reduce overspray and obtain maximum efficiency, always spray with the lowest possible fluid/air pressure that produces an acceptable spray pattern.

Excessive atomizing air pressures can increase overspray, reduce transfer efficiency, and with some materials, result in poor finish quality from dry spray.

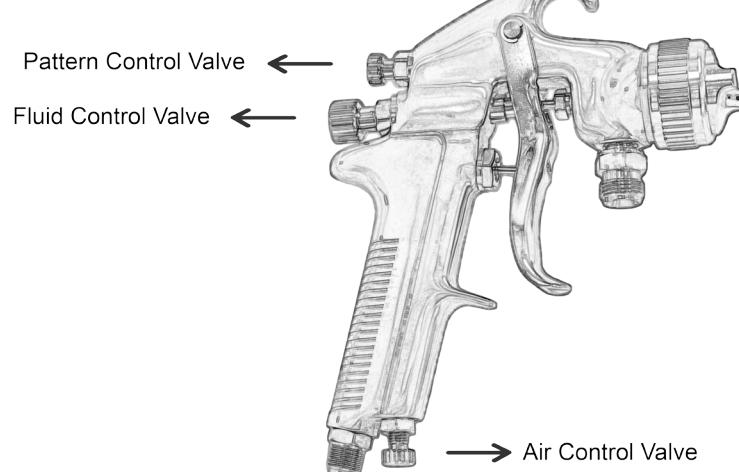
OPERATING THE 905 SPRAY GUN



For best results, use 3 to 6 psi fluid pressure. Higher than 6 psi fluid pressure may be required for heavy-bodied materials. Low fluid pressures will produce a narrower than normal spray pattern. Generally use 30-35 psi air at gun inlet. Unusually heavy, difficult to atomize fluids may require up to 50 psi air at gun inlet.

CONTROLLING THE FAN SPRAY

The fan spray is controlled by means of the spray pattern valve. Turning this control clockwise until it is closed will give a round spray; turning it counterclockwise will widen the spray into a fan shape. The fan spray can be turned anywhere through 360° by positioning the air nozzle relative to the gun. To accomplish this, loosen retaining ring, position nozzle, then tighten retaining ring.



AIR NOZZLE, FLUID NOZZLE, FLUID NEEDLE

1. All nozzles and needles are precision made. They should be handled with care.
2. Do not make any alterations in the gun. To do so could cause finishing difficulties.
3. To clean nozzles, soak them in solvent to dissolve any dried material, then blow them clean with air.
4. Do not probe any of the holes in the nozzles with metal instruments. If probing is necessary, use only a tool that is softer than brass.

TROUBLESHOOTING

Faulty Spray

A faulty spray pattern is often caused by improper cleaning resulting in dried materials around the fluid nozzle tip or in the air nozzle. Soak these parts in thinners to soften the dried material and remove with a brush or cloth.

CAUTION

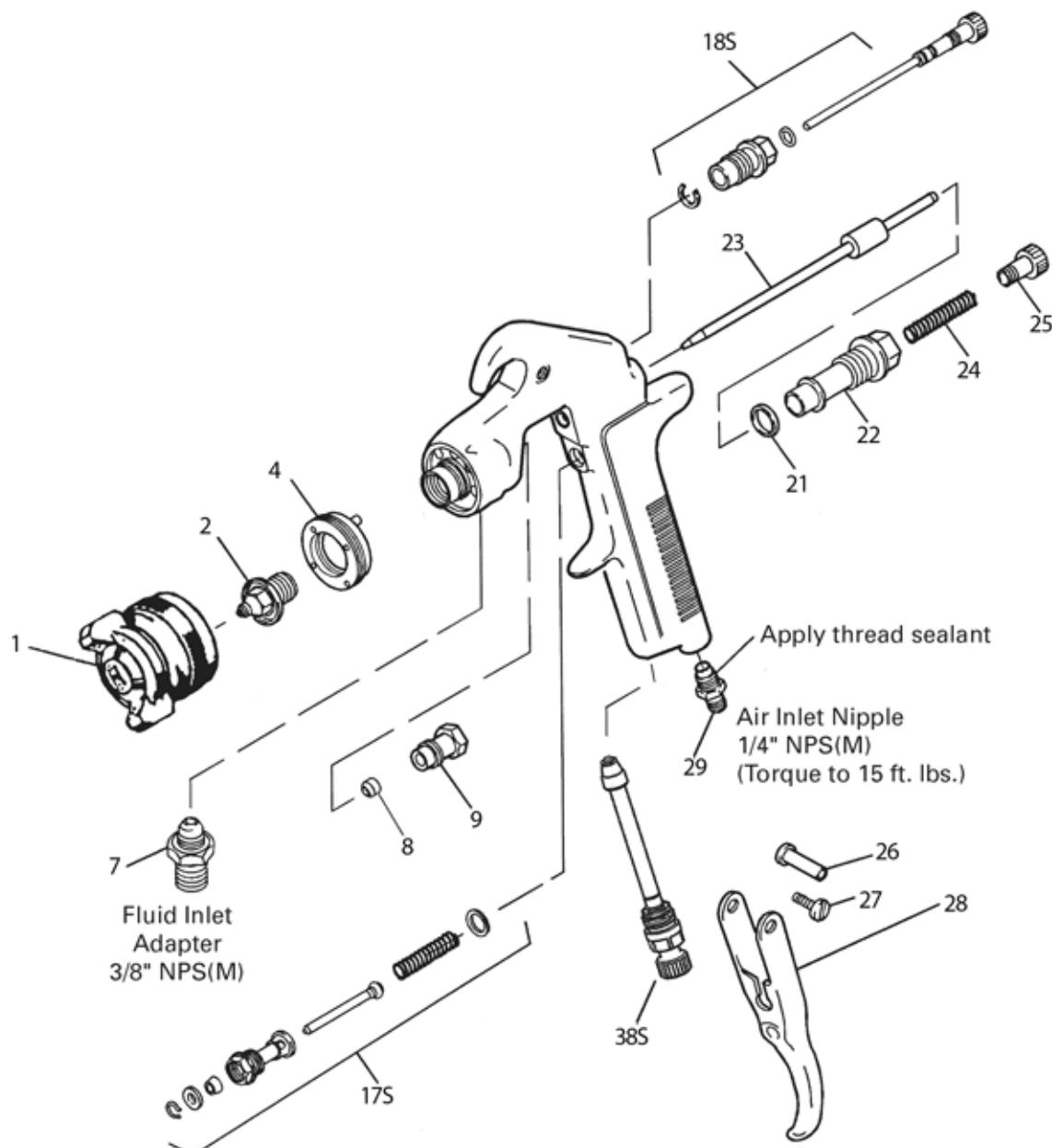
Never use metal instruments to clean the air or fluid nozzles. These parts are carefully machined and any damage to them will cause faulty spray.

If either the air nozzle or fluid nozzle are damaged, these parts must be replaced before perfect spray can be obtained. When replacing the fluid tip or fluid needle, replace both at the same time. Using worn parts can cause fluid leakage. Also, replace the needle packing at this time. Lightly lubricate the threads of the fluid tip before reassembling.

Intermittent Spray

If the spray flutters, it is caused by one of the following faults:

1. Insufficient fluids available. Check supply and replenish if necessary.
2. Fluid tip not tightened sufficiently.
3. Packing loose or worn.



Item No.	Description	Item No.	Description
1	Air Cap & Nut	22	Fluid Needle Guide
2	Fluid Nozzle	23	Needle
4	Distributor	24	Spring
7	Fluid Nipple	25	Adjustment Screw
8	Packing	26	Pin
9	Screw	27	Retaining Ring
17S	Air Valve Assembly	28	Trigger
18S	Pattern Adjustment Valve	29	Connection
21	Gasket	38S	Air Adjustment Valve

Storm Machinery Standard Warranty

Storm Machinery warrants all equipment referenced in this document which is manufactured by Storm Machinery and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Storm Machinery, Storm Machinery will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Storm Machinery to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Storm Machinery's written recommendations.

This warranty does not cover, and Storm Machinery shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Storm Machinery component parts. Nor shall Storm Machinery be liable for malfunction, damage or wear caused by the incompatibility of Storm Machinery equipment with structures, accessories, equipment or materials not supplied by Storm Machinery, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Storm Machinery.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Storm Machinery distributor for verification of the claimed defect. If the claimed defect is verified, Storm Machinery will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labour, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Storm Machinery's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within one (1) year of the date of sale.

Storm Machinery MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY Storm Machinery.

These items sold, but not manufactured by Storm Machinery (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Storm Machinery will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Storm Machinery be liable for indirect, incidental, special or consequential damages resulting from Storm Machinery supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Storm Machinery, or otherwise.

FOR NON-ENGLISH SPEAKING CUSTOMERS

The Parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English.

FRENCH

Les parties reconnaissent avoir convenu que la rédaction du présent document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés, à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

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Las partes reconocen haber convenido en que la redacción de este documento será en Inglés, así como todos los documentos, notificaciones y procedimientos judiciales emprendidos, dados o incoados como consecuencia de o en relación directa o indirectamente con los procedimientos pertinentes.

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ARABIC

تاءارجإ او تاءارعشإ او قىاشولى عىمچ كىلذكىر، ئىزىلىجنإلا ئەغللاب نوڭىت فوس ققىيىشولى مەدە ئەغايىص نأ ئىلۇع اقىقىتىا ام منأ نافرطلۇ فەرتەتىعى قىلىلى تاذ تاءارجإلا عەم قۇشىابم رىيغ و آقۇشىابم قۇرۇصب قىلىعىتىي امېيىف و آقۇچىتىن تەعچىرى و آن يىعەم، بەتەرپا يېتىلما ئەينىنون قىلىنى.

TO PLACE AN ORDER, please contact your nearest Storm Machinery distributor.

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