

GFG™ GRAVITY PRO™ MODEL GFG-517 CONVENTIONAL SPRAY GUN

IMPORTANT: Before using this equipment, read all safety precautions and instructions. Keep for future use.

DESCRIPTION

The GFG-517 is a general purpose, heavy duty, high production spray gun suitable for use with most types of materials. The fluid tip and needle and internal fluid passages are stainless steel.

Note

This gun includes 300 series stainless steel fluid passages and 400 series tip and needle. Guns may be used with chlorinated solvent materials. The gravity cup must also be compatible for use with chlorinated solvent materials (GFC-501 Acetal).

IMPORTANT: This gun is designed for use with mildly corrosive and non-abrasive materials. If used with other high corrosive or abrasive materials, it must be expected that frequent and thorough cleaning will be required and the necessity for replacement of parts will be increased.

Note

The GFC gravity feed cups are included with the gun as part of the GFG-618 gun and cup kits. See *Accessories* on page 6 for more information.

INSTALLATION

1. Attach the air supply line to the air inlet (18). An air transformer installed as close as possible to the gun will provide filtered and regulated air.

Note

When larger diameter air hoses are used, it is advisable to use an 8' or 10' "whip end" or a smaller diameter hose at the gun for greater flexibility or movement.

2. Attach the gravity feed cup to the material inlet.

Note

Protective coating and rust inhibitors have been used to keep the gun in good condition prior to shipment. Before using the gun, flush it with solvents so that these materials will be removed from fluid passages.

OPERATION

Mix, prepare and strain the material to be sprayed according to the paint manufacturer's instructions.

Strain material through a 60 or 90 mesh screen.

1. Fill the gravity feed cup with the material. Do not overfill. Make sure that the cup lid vent hole is clear.
2. Turn on the air at the source of supply. Adjust the atomization air pressure to 35 psi.
3. Open the spreader adjustment valve (19) (Fan) by turning the valve stem counter-clockwise.
4. Close the fluid needle adjusting screw (25) by turning clockwise.
5. Spray a test area by turning the fluid needle adjusting screw (25) counter-clockwise until a full coat is obtained.

If the finish is too sandy and dry, the material flow may be too low for the atomization air pressure being used.

If the finish sags, there is too much material flowing for the atomization air pressure being used.

Both of the above can be corrected by increasing or decreasing the atomization air pressure or the material flow. Pattern width can be altered by turning the spreader adjustment valve (19), either clockwise to decrease the width or counter-clockwise to increase the width.

PREVENTIVE MAINTENANCE

To clean air cap and fluid tip, brush exterior with a stiff bristle brush. If necessary to clean cap holes, use a broom straw or toothpick. **Never use a wire or hard instrument.** This may scratch or burr holes causing a distorted spray pattern.

To clean fluid passages, remove excess material from cup, then flush with a suitable solvent. Wipe gun exterior with a solvent dampened cloth. Never completely immerse in solvent as this is detrimental to the lubricants and packings.

Note

When replacing the fluid tip or fluid needle, replace both at the same time. Using worn parts can cause fluid leakage. Tip and needle sets are available. See Chart 2. Also, replace the needle packing at this time. Lightly lubricate the threads of the fluid tip before reassembling. Torque to 20-25 ft. lbs. Do not overtighten the fluid tip.

CAUTION

To prevent damage to the fluid tip (2) or fluid needle (2), be sure to either 1) pull the trigger and hold while tightening or loosening the fluid tip or 2) remove fluid needle adjusting screw (25) to relieve spring pressure against needle collar.

SAFETY PRECAUTIONS

This manual contains information that is important for you to know and understand. This information relates to USER SAFETY and PREVENTING EQUIPMENT PROBLEMS. To help you recognize this information, we use the following symbols. Please pay particular attention to these sections.



Important safety information - A hazard that may cause serious injury or loss of life.


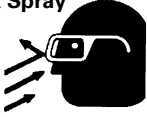




Important information that tells how to prevent damage to equipment, or how to avoid a situation that may cause minor injury.

NOTE

Information that you should pay special attention to.

**The following hazards may occur during the normal use of this equipment.
Please read the following chart before using this equipment.**

HAZARD	CAUSE	SAFEGUARDS
Fire 	Solvent and coatings can be highly flammable or combustible especially when sprayed.	<p>Adequate exhaust must be provided to keep air free of accumulations of flammable vapors.</p> <p>Smoking must never be allowed in the spray area.</p> <p>Fire extinguishing equipment must be present in the spray area.</p>
Solvent Spray 	During use and while cleaning and flushing, solvents can be forcefully expelled from fluid and air passages. Some solvents can cause eye injury.	Wear eye protection.
Inhaling Toxic Substances 	Certain materials may be harmful if inhaled, or if there is contact with the skin.	<p>Follow the requirements of the Material Safety Data Sheet supplied by your coating material manufacturer.</p> <p>Adequate exhaust must be provided to keep the air free of accumulations of toxic materials.</p> <p>Use a mask or respirator whenever there is a chance of inhaling sprayed materials. The mask must be compatible with the material being sprayed and its concentration. Equipment must be as prescribed by an industrial hygienist or safety expert, and be NIOSH approved.</p>
Explosion Hazard - Incompatible Materials 	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.	Guns with stainless steel internal passageways may be used with these solvents. However, aluminum is widely used in other spray application equipment - such as material pumps, regulators, valves, and cups. Check all equipment items before use and make sure they can also be used safely with these solvents. Read the label or data sheet for the material you intend to spray. If in doubt as to whether or not a coating or cleaning material is compatible, contact your material supplier.
General Safety	Improper operation or maintenance of equipment.	Operators should be given adequate training in the safe use and maintenance of the equipment (in accordance with the requirements of NFPA-33, Chapter 15). Users must comply with all local and national codes of practice and insurance company requirements governing ventilation, fire precautions, operation, maintenance, and housekeeping. These are OSHA Sections 1910.94 and 1910.107 and NFPA-33. Risk is reduced by avoiding or lessening factors 1-7.

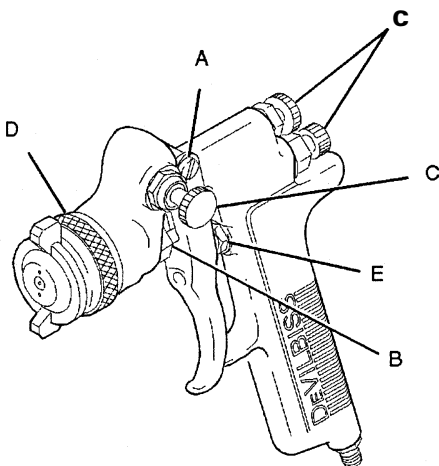
HAZARD	CAUSE	SAFEGUARDS
<p>Cumulative Trauma Disorders ("CTD's")</p> <p>CTD's, or musculoskeletal disorders, involve damage to the hands, wrists, elbows, shoulders, neck, and back. Carpal tunnel syndrome and tendonitis (such as tennis elbow or rotator cuff syndrome) are examples of CTD's.</p>	<p>Use of hand tools may casue cumulative trauma disorders ("CTD's").</p> <p>CTD's, when using hand tools, tend to affect the upper extremities. Factors which may increase the risk of developing a CTD include:</p> <ol style="list-style-type: none"> 1. High frequency of the activity. 2. Excessive force, such as gripping, pinching, or pressing with the hands and fingers. 3. Extreme or awkward finger, wrist, or arm positions. 4. Excessive duration of the activity. 5. Tool vibration. 6. Repeated pressure on a body part. 7. Working in cold temperatures. <p>CTD's can also be caused by such activities as sewing, golf, tennis, and bowling, to name a few.</p>	<p>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 hand, loss of manual dexterity, and nonspecific pain in the arm. Ignoring early symptoms and continued repetitive use of the arm, wrist, and hand can lead to serious disability.</p>

SPRAY GUN LUBRICATION

Daily, apply a drop of SSL-10* spray gun lube at trigger bearing stud (15) and the stem of the air valve (10) where it enters the air valve assembly (13). The shank of the fluid needle (2) where it enters the packing nut (6) should also be oiled. The fluid needle packing (5) should be lubricated periodically. Make sure the baffle (4) and retaining ring (1) threads are clean and free of foreign matter. Before assembling retaining ring to baffle, clean the threads thoroughly, then add two drops of SSL-10 spray gun lube to threads. The fluid needle spring (22) and air valve spring (11) should be coated with a very light grease, making sure that any excess grease will not clog the air passages. For best results, lubricate the points indicated, daily.

*Not for air tools or high RPM equipment.

- A. Trigger Points
- B. Packing
- C. Adjusting Valves
- D. Baffle Threads
- E. Air Valve Cartridge



PARTS REPLACEMENT

Replacement Instructions for O-ring on Spreader Adjustment Valve

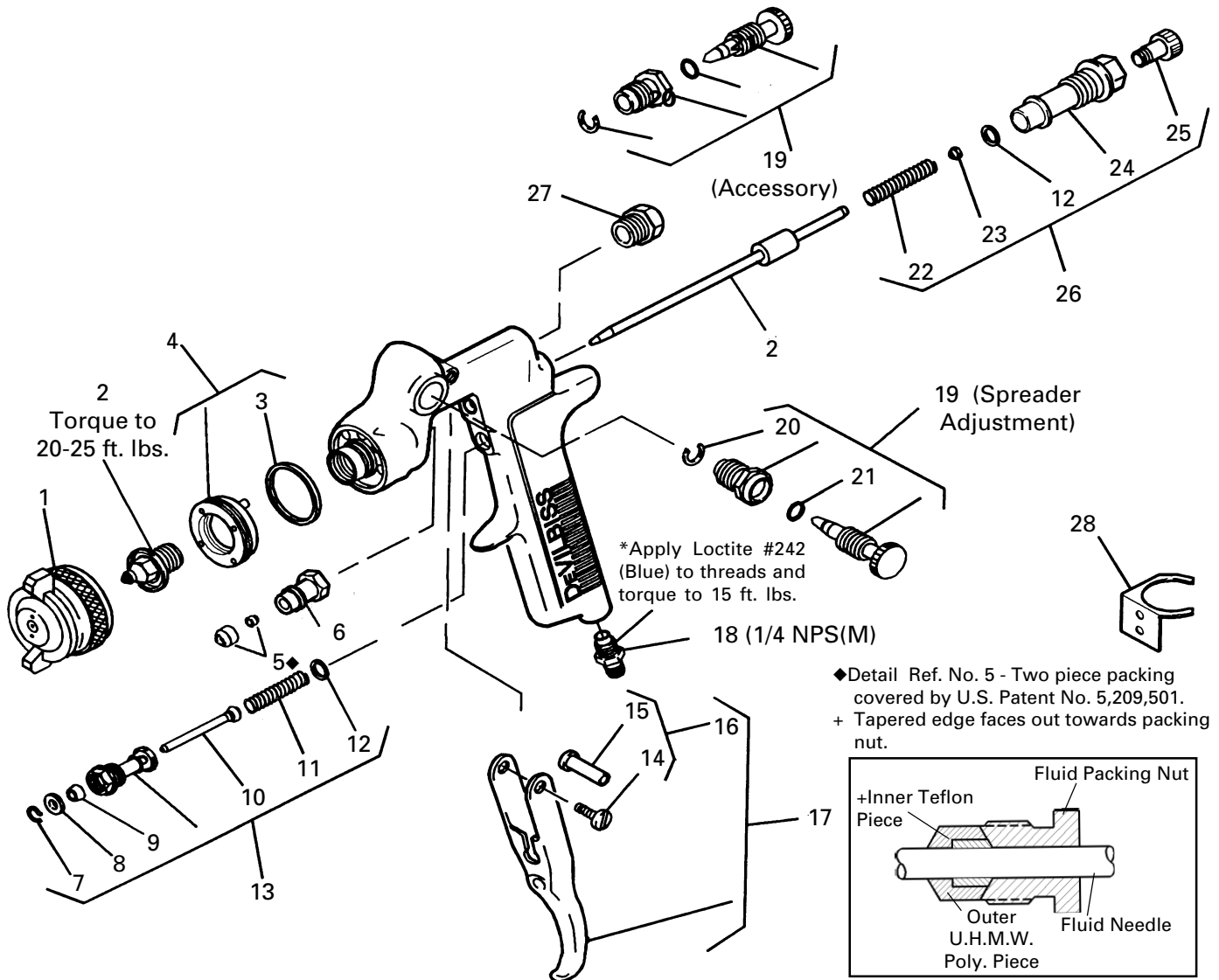
1. Remove retaining ring (20) on spreader adjustment.
2. Remove valve stem and Teflon® O-ring (21) from valve body.
3. Insert new Teflon® O-ring (21) in valve body. Make sure it is pushed past the threads.
4. Insert valve stem.
5. Reinstall retaining ring (20).

CHART 1

Air Caps	
If This No. On Cap, Order →	Ref. No. 1 Air Cap with Retaining Ring
No. 9000 No. 80	AV-440-9000 MB-4039-80

CHART 2

Fluid Tips and Needles			
GFG-517		Ref. #2	
Tip Size	Fluid Tip Size I.D. Dimensions	If This No. On Tip, Order →	Tip and Needle Sets
EX	0.070" 1.75 mm	AV-2115-EX	JGA-4040-EX
FW	0.063" 1.6 mm	AV-2115-FW	JGA-4040-FW
FF	0.055" 1.4 mm	AV-2115-FF	JGA-4040-FF








PARTS LIST

Ref. No.	Part No.	Description	Individual Parts Req.
1	See Chart 1	Air Cap & Retaining Ring	1
2	See Chart 2	Lapped Fluid Tip and Needle	1
• 3	JGD-14-K10	Seal (Kit of 10) (Polyethylene)	1
4	JGD-402-1	Baffle	1
+ 5	JGV-463-K3	Fluid Needle Packing (Kit of 3)	1
6	34411-122-K10	Fluid Needle Packing Gland (Kit of 10)	1
• 7	—	Snap Ring	1
• 8	—	Washer	1
+ 9	—	U Cup	1
• 10	—	Air Valve	1
• 11	—	Spring	1
+ 12	JGS-72-K10	Gasket (Kit of 10) (Teflon®)	2
• 13	JGS-449-1	Air Valve Assembly	1
• 14	—	Screw	1
15	—	Trigger Bearing Stud	1
16	JGS-478	Stud and Screw Kit (Kit includes 3 studs & 5 screws)	1

Ref. No.	Part No.	Description	Individual Parts Req.
17	JGS-477-1	Trigger, Stud and Screw Kit (Kit includes 1 each)	1
18	P-MB-51	Air Inlet Connector 1/4" NPS(M)	1
19	GFG-413-2	Spreader Adjustment Valve	1
• 20	—	Retaining Ring	1
+ 21	—	O-ring (Teflon®)	1
• 22	MBD-19-K10	Fluid Needle Spring (Kit of 10)	1
• 23	—	Spring Pad (Included with #22)	1
24	—	Gun Body Bushing	1
25	JGS-16	Fluid Needle Adjusting Screw	1
26	JGA-4041	Bushing, Spring & Knob Kit	1
27	6000-12	Plug	1
28	GFG-6	Gun Hook	1

• KK-5025 Gun Repair Kit includes a quantity of necessary parts and should be kept on hand for service convenience.
+ KK-5036 Soft Gun Repair Kit includes a quantity of necessary parts.
Suffixes - K5, K10 designate kits of multiple parts. (Example)

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. 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. 3. Check for dried paint just inside the opening; remove by washing with solvent.	Clean. Ream with non-metallic point. Clean.
Heavy center pattern 	Fluid flow too high for atomization air. 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 at transformer 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.	Tighten or replace. Refill. Hold more upright. Backflush with solvent. Lubricate or tighten.
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.	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.
Paint bubbles in cup	Fluid tip not tight.	Tighten tip to 20-25 ft-lbs.
Fluid leaking or dripping from cup lid	Cup lid loose. Dirty threads on cup or lid. Cracked cup or lid.	Tight lid. Clean. Replace cup and lid.
Starved spray pattern	Inadequate material flow. Low atomization air pressure.	Back fluid adjusting screw out to first thread, or change to larger tip size. 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 problem.

TROUBLESHOOTING (Continued)

CONDITION	CAUSE	CORRECTION
Fluid dripping or leaking from bottom of cup	Cup loose on gun. Washer worn or missing below cup. Cup threads dirty.	Tighten. Replace washer. Clean.
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 flow. Mix properly or apply light coats. Hold gun at right angle to work and adapt to proper gun technique.
Thin, sandy coarse finish drying before it flows out	Gun too far from surface. Too much air pressure. Improper thinner being used.	Check distance. Normally approx. 8". Reduce air pressure and check spray pattern. Follow paint manufacturer's mixing instrs.
Thick, dimpled finish "orange peel"	Gun too close to surface. Air pressure too low. Improper thinner being used. Material not properly mixed. Surface rough, oily, dirty.	Check distance. Normally approx. 8". Too much material coarsely atomized. Increase air pressure or reduce fluid flow. Follow paint manufacturer's mixing instrs. Follow paint manufacturer's mixing instrs. Properly clean and prepare.

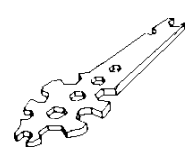
ACCESSORIES

GFC-501 (Acetal) 20 Oz. Cup
GFC-502 (Aluminum) 32 Oz. Cup
Gravity Feed Cups

These gravity feed cups are designed to be used with GFG gravity feed spray guns.



WR-103 Wrench



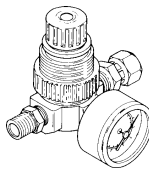
Contains all necessary tip, hose, and nut sizes used on or with gun.

HAV-500 OR HAV-501 Adjusting Valve (HAV-501 SHOWN)



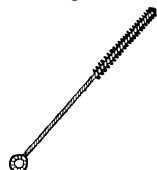
HAV-500 does not have pressure gage. Use to control air pressure at gun.

HARG-510 Air Regulator



Use to maintain nearly constant outlet pressure despite changes in inlet pressure and downstream flow.

42884-214-K5 3/8" Cleaning Brushes
42884-215-K10 5/8" Cleaning Brushes

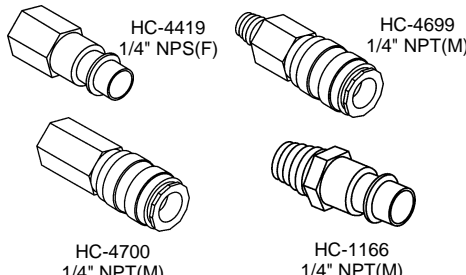


These brushes are helpful in cleaning threads and recesses of gun body.

Spray Gun and Cup Kits

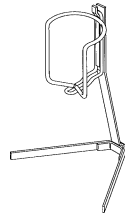
GFG-517 Spray Gun is also sold in the following Kits: Each Kits includes (1) GFG-517 Spray Gun and (1) GFG-502 Cup:
GFG-618-80FW GFG-618-90FF
GFG-618-90FW

Quick Disconnect Approved For HVLP Guns (Air)
High Flow Ball and Ring Type.



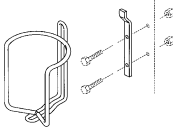
HC-4419 1/4" NPS(F) HC-4699 1/4" NPT(M)
HC-4700 1/4" NPT(M) HC-1166 1/4" NPT(M)

GH-505 Gun Holder



Gun holders are made to hold standard paint cups, gravity feed guns and cups, and paint filters.

GH-407 Gun Holder




(1) Wall mount bracket included with GH-407.

Spray Gun Lube SSL-10-K12 (2 oz. bottle)



Compatible with all paint materials; contains no silicone or petroleum distillates to contaminate paint.


GFG-413-2 Air Adjustment Valve



Installs into gun to enable user to control and reduce air pressure at the gun. Replaces 6000-12 plug.

JGA-156-K10 Spring Clips

Joins any single piece Devilbiss air cap with latest version MBC-368 or MSA-1 retaining ring. Helps prevent parts loss and provides easier assembly.



OMX-70-K48 PAINT CUP LINER KIT
Allows quick and easy clean-up.

Consists of: 1 - Piercing Tool,
48 - Disposable Liners,
48 - Drain Bushings

HAF-507 Whirlwind™ In-Line Air Filter

Removes water, oil, and debris from the air line.



WARRANTY

This product is covered by ITW DeVilbiss' 1 Year Limited Warranty. See SB-1-000 which is available upon request.

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INDUSTRIAL FINISHING

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