

## OPERATING INSTRUCTIONS and SPRAYING TIPS

Thank you for choosing a Turbinaire HVLP Sprayer for your spray equipment needs. The following five steps will help you get started quickly and easily. For further information, please consult your Operator's Manual.

### 1. TURBINE & HOSE SET-UP

- With power switch in OFF position, place turbine as far away from spray area as possible and plug into a standard power outlet.
- Uncoil 25' air hose and install it hand-tight to turbine air outlet. If you purchased TSG-3295 (optional 5' Heavy-Duty Hose) install it first and then install 25' hose to male end of TSG-3295. If you purchased TSG-3285 (optional 5' flex hose) remove brass Quick Connect Coupler from 25' hose and install it on male end of TSG-3285; then connect female end of TSG-3285 to male end of 25' hose.

### 2. SPRAY GUN SET-UP

- Remove paint cup from gun by sliding cam lever sideways.
- Following coating manufacturer's directions for spraying, prepare material to be sprayed and pour in cup.
- Using viscosity cup supplied, measure viscosity of material (see overleaf).
- Using selection chart (see overleaf) as a guideline, select and install proper size Atomizing Kit based on material being sprayed.
- Install paint cup to gun.
- To connect gun to hose, pull back ring on brass Quick Connect Coupler and insert male tail piece on end of gun handle into coupler.

### 3. TO BEGIN SPRAYING

- Press turbine power switch to down position (variable) and turn speed controller knob to maximum.
- If your BNB gun is set-up as a bleeder, air will now be blowing out of Air Cap; if set-up as non-bleeder (as supplied), air will only start when trigger is squeezed. In either case, cup is now pressurized – DO NOT remove cup from gun when connected to hose and turbine is on.
- As a non-bleeder, BNB gun has two stage trigger: first stage releases air through handle and second stage releases material from cup.
- While squeezing trigger to release material from cup, slowly turn Material Flow Adjustment Screw (at rear of gun) counter-clockwise until desired material flow is achieved. To ensure consistent and even material flow across pattern, work with trigger as engaged (squeezed) as possible – if material flow gets too heavy, use smaller Atomizing Kit.

### 4. SPRAY PATTERN – DIRECTION and SIZE

- Use vertical pattern to spray left to right, horizontal pattern to spray up and down, and round pattern for detail work and/or scratch repair. To select desired spray pattern, loosen Sleeve Nut and rotate Air Cap at front of gun. NOTE: when in horizontal position, spray pattern will be vertical; when in vertical position, spray pattern will be horizontal; for a round pattern, turn Fan Size Adjustment Screw completely clockwise.
- To adjust fan size of vertical and horizontal patterns, turn Fan Size Adjustment Screw at top back of gun.
- Place Air Cap in vertical position and perform horizontal pattern test as described overleaf.

### 5. THE VARIABLE SPEED CONTROLLER

- Variable Speed Controller (VSC) allows you to adjust air output of turbine based on material being sprayed – increase air output for heavy bodied material (latex paint) and decrease air output for light body material (stain). Using VSC properly will reduce overspray and increase transfer efficiency, especially with light body material like stain, shellac and wood finishes.
- With power switch in down position, turn speed control knob to MAX.
- While spraying a test piece, slowly turn speed control knob counter-clockwise to gradually reduce air output as much as possible without affecting desired coating thickness and finish.

You are now ready to begin spraying! The following spraying tips and the techniques illustrated overleaf help make professional finishing easy!

### Spraying Tips

- To ensure even coverage and avoid streaks always perform the horizontal pattern test before starting.
- Spray a test piece first to evaluate spraying distance, pattern size, film thickness, Atomizing Kit selection and finish.
- Hold gun perpendicular to surface, maintain a consistent distance of 6-8 inches from the surface and spray with a smooth continuous stroke.
- Release trigger at end of every pass and overlap passes 50% to ensure even coverage.
- Always follow coating manufacturers' instructions regarding thinning solvents and dilution ratios when preparing the materials to be sprayed.
- **CAUTION:** Air Pressure Feed Tube that pressurizes cup is equipped with a check valve therefore cup will remain pressurized even after turbine has been turned off and gun has been disconnected from hose. To release pressure in cup, simply slide cam lever slowly and carefully remove cup.
- Once you have finished spraying, turn Material Flow Adjustment Screw completely clockwise and wipe excess material on Fluid Tip. This avoids material being inadvertently released from cup while it is pressurized and ensures that Needle closes Fluid Tip air-tight allowing for, depending on the coating, material to be left in cup between jobs.



*Thank-you for choosing Turbinaire. For further information, please contact your local Turbinaire distributor, visit our web site at [www.turbinaire.com](http://www.turbinaire.com), or contact us directly at 1-800-866-HVLP(4857), e-mail: [sales@turbinaire.com](mailto:sales@turbinaire.com)*

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## Atomizing Kit Selection Chart

Material	Viscosity	Atomizing Kit
Wood Stains, Dyes, Lacquers, Automotive Paints, Cellulose, Synthetics, Acrylic, Oil	0-20 sec	0.75 - 1.00mm
Polyurethane, Lacquers, Acrylics, Glitter Paints, Cellulose, Synthetics, Fluorescents, Wood Stains, Creosote, Wood Primer, Multi-Color, Latex	20-30 sec	1.00 - 1.50mm
Oil Base Paint, Latex, Hammers, Oxides, Primers, Marine Paint, Varnish, Enamels, Multi-Color, Industrial Synthetics, Aluminum Paints	30-35 sec	1.50 - 2.00mm
Emulsions, Oxides, Gel Coat, Zinc Rich Primers, Polyurethanes, Adhesives, Latex	35-40 sec	2.00 - 2.50mm
Hammers, Latex, Oil Base Primers, Enamels, Marine, Masonry Paints, Texture Coatings, Heavy Primers, Soluble Adhesives, Gel Coat	40+ sec	2.50 - 3.50mm

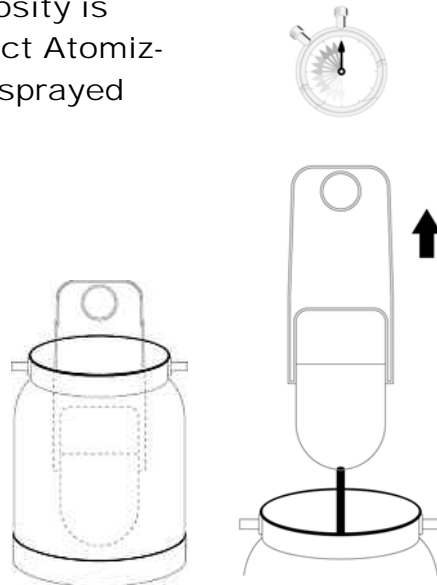
### To Change Atomizing Kit:

1. Remove Material Flow Adjustment Screw and Needle Spring
2. Pull Trigger and remove Needle
3. Remove Sleeve Nut and Air Cap
4. Remove Fluid Tip using 1/2" socket and ratchet
5. Reverse steps 1-4 to re-install

## Measuring Viscosity

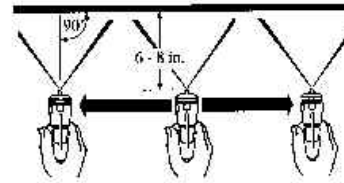
The thickness of a coating is defined by "viscosity in seconds". Knowing the viscosity is helpful in selecting the correct Atomizing Kit for the coating being sprayed

1. Completely submerge the viscosity cup in the coating to be sprayed
2. Lift the viscosity cup out of the coating and begin timing
3. Measure the time in seconds until the first break in the stream of coating coming out of the bottom of the viscosity cup
4. Record the time lapsed as the viscosity of the coating, i.e.: 25 seconds

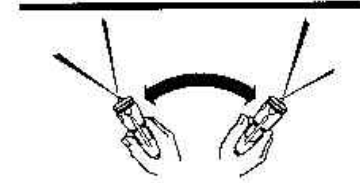


## Spraying Tips

Spray at 6-8" from the surface, holding the gun perpendicular to the surface

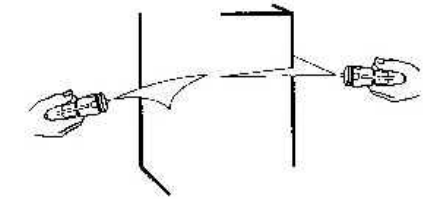
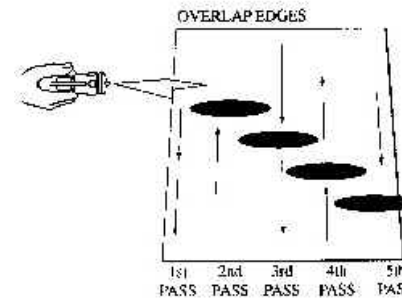


Correct application technique



Incorrect application technique

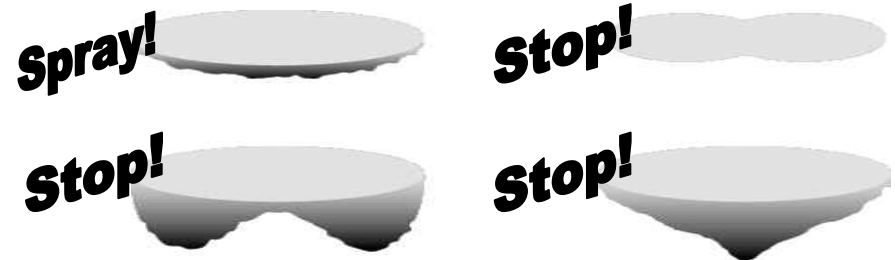
Overlap strokes by 50% to ensure proper coverage and avoid streaks



When spraying inside and/or outside corners, spray the center of the spray pattern on the corner so that material is applied to each of the adjacent surfaces

Always spray a horizontal test pattern before spraying:

Spray a horizontal pattern on a test piece. Spray and hold until material builds-up and then release the trigger — this is the only time in finishing that you'll want to see a run or sag! Inspect the pattern. If the material is sagging evenly across the pattern, start spraying, otherwise consult the chart below.



Problem	Solution
Coating is running/dripping from center of pattern	<ol style="list-style-type: none"> <li>1. Enlarge fan size</li> <li>2. Reduce Material Flow</li> <li>3. Change Atomizing Kit</li> </ol>
Coating is running/dripping from extremities of pattern and/or pattern is in form of figure 8	<ol style="list-style-type: none"> <li>1. Reduce fan size</li> <li>2. Increase Material Flow</li> <li>3. Change Atomizing Kit</li> </ol>
Any one of above with remote pressure pot	Check fluid pressure in pot for +/- 4" stream of material