



Wood Finishing Guide

Our thorough knowledge of the wood furniture and cabinet industries provides us with all the resources you need. From the pump house to the finishing line, we have the technology and the products you need to produce the fine finishes your customers demand.

Binks & DeVilbiss.

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Combining
over 200 years
of leadership
and innovation.



Binks and DeVilbiss are familiar names to wood finishers. Their combined expertise spans more than two centuries.

In 1998, the brands you've come to rely on for your industrial finishing operation joined forces to become the primary

solution source for wood finishing



applications. From spray guns and accessories to pumps and plural component metering and



mixing equipment, Binks and DeVilbiss are your best choices for standard application and fluid delivery products. Our team of experts – Wood Finishing Specialists, Equipment Design Engineers, Technicians and Customer Service Professionals – are constantly working to bring you the quality, efficiency, performance, and value you expect from the world's most recognized spray finishing brands. When you want the best, ask for it by name.

Insist on Binks and DeVilbiss.



Partnering With The Wood Finishing Industry

NESHAP Involvement

National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations have had a significant impact on wood finishing operations at all levels. As your finishing partner, we teamed up with the American Furniture Manufacturers Association (AFMA), the Kitchen Cabinet Manufacturers Association (KCMA) and TRC Environmental to produce a package to assist wood product manufacturers in meeting NESHAP requirements. For further information about NESHAP class work, hands-on training, and course materials, please contact your Binks or DeVilbiss Wood Finishing Specialist.

Training

The best finishing operation and equipment in the world can't perform to its fullest potential unless used properly. We offer a number of training opportunities to help your finishing professionals achieve maximum performance from our products. Classes, workshops, and seminars are customized to target your specific educational needs and include both classroom and hands-on sessions on: surface preparation, equipment types, evaluation/quality control, compliance issues, and specific spray applications associated with your wood finishing operation.

From our nationally renowned Finishing Workshop in conjunction with Bowling Green State University, to a wide range of community college courses of study and classes, to on-site training, to NESHAP required education, our training opportunities are designed specifically for individuals involved with wood spray finishing applications. We contribute educational materials, trainers, and our most advanced spray finishing equipment to ensure that wood finishing professionals receive the best training possible.

Finish Room Audits

While leading wood furniture manufacturers make spot checking part of their normal maintenance routine, recurring problems translate into lost production time and costly re-works. Conducting a periodic full-scale audit of the finishing operation allows manufacturers to focus on overall performance and specific problems in an effort to find practical solutions to improve the bottom line.

Our wood audit involves the plant manager, finish room supervisor, and coatings supplier, and can include quality control and environmental representatives who identify problems based on their own data. It uses a detailed checklist to evaluate three critical areas and provides detailed, booth-by-booth written recommendations for improving finishing operations.

- * Quality Issues
 - * Efficiency with Finishing Material
 - * Regulation Compliance Issues
- For further information about our Finish Room Audit Program, please contact your Binks or DeVilbiss Wood Finishing Specialist.



Wood Finishing Specialists & Distributors

It takes time to fully understand the many components that contribute to the strength of a wood finishing operation. That's why we've designated a team of Wood Finishing Specialists with the knowledge and expertise you need to keep your finish line running as efficiently as possible. To consult with a Wood Finishing Specialist or a Wood Finishing Distributor in your area, please call our customer service representatives at 1-800-992-4657, or your local Binks or DeVilbiss Wood Finishing Specialist.

Innovative Technology



We were one of the first finishing manufacturers to understand and incorporate the science of ergonomics into our spray gun design to help

maximize wood finishing operations. In 1996, we received an IWF Challenger's Award for our efforts to design the industry's first truly ergonomic spray gun. Now recognized as an industry leader in the ergonomics of wood finishing, we continue to set the standards for the marketplace.

Environmentally Responsible

Binks and DeVilbiss have long been concerned about protecting the planet for future generations. In fact, we strive to make our products as environmentally friendly as possible. We actively support a number of ecology-minded groups.



Today's Wood Finishing

The Big Picture

Overwhelmed by the number of choices for making your wood finishing operation as productive as possible? You're not alone. With thousands of products available and compliance regulations influencing overall operations, the wood finishing equipment marketplace is becoming more complicated all the time.

The Wood Finishing Guide is designed to familiarize you with the overall components of wood finishing. In addition, it will help you select the Binks and DeVilbiss brand spray guns, cups, hoses, tanks, pumps and accessories that are right for your needs. We want to help you choose the finishing equipment you need to achieve the quality and production your operation demands as cost efficiently as possible.



Ergo-Logic

Ergonomics, the science of matching the workplace to the worker, has emerged as key factor in the productivity equation. Good ergonomics can lead to increased production, quality, and compliance. Poor ergonomics can have a significant negative effect on the bottom line. In industrial processes like wood finishing, where the worker's performance is closely linked with the overall success of the production line, good ergonomics makes sense.

Spray finishing ergonomic benefits:

- Reduce material usage
- Continuously improve quality
- Reduce VOCs and waste disposal
- Comply with environmental, health and safety regulations
- Improve painter comfort and job satisfaction – retain good sprayers
- Reduce workers' compensation costs

Realizing the importance of a spray gun's physical effects on the operator, DeVilbiss contracted with the Biodynamics Laboratory at The Ohio State University to scientifically experiment and investigate the musculoskeletal risks associated with an ergonomic spray gun and a traditional metal spray gun. That data has been invaluable in our quest to manufacture spray guns and equipment to make it easier for operators to do a better job. For a copy of our OSU Study, contact your Binks or DeVilbiss Wood Finishing Specialist.



Optimum Atomization

To ensure that you achieve the best atomization possible, keep these finishing tips in mind.

- Check flow rates daily by developing a pressure standardization program
- Clean build-up from gun tip and air caps as required
- Use a regulator to adjust air pressure, not ball and needle valves
- Always use the lowest fluid and air pressure possible while maintaining production and quality requirements
- Lubricate gun daily
- Before production spraying, test for atomization quality, pattern shape, pattern uniformity, and proper shade or color desired
- For HVLV guns, reduce fluid flow rate to 15–25% less than a conventional gun
- For HVLV guns, hold gun 6–8 inches from the target
- For Conventional guns, hold gun 10–12 inches from the target



The DeVilbiss Maximum Performer™ spray gun line provides HVLV finishing like you've never seen before. And thanks to our exclusive GoldMax™ air caps, Maximum Performer spray guns deliver the finest, most consistent atomization, no matter what materials you spray. These guns include:

- A standard-size manual spray gun designed to maintain the comfortable fit and feel operators prefer
- A lighter-weight mid-size model designed for reducing operator fatigue
- A gun designed for use with robots and automatic machines
- A comfortable and easy-to-control detail/touch-up spray gun

The DeVilbiss Maximum Performer line can collectively handle most coatings being applied today.

Sap, Toner/Equalizer, & Overall Stain

Sapping Stain is applied to a piece of wood of varying color or type to help achieve uniform color. It is usually used with lighter colored woods. *Equalizer* gives uniform color to lower quality wood, or wood that varies in color. *Overall Stain* establishes the undertone color of a piece of wood.



It takes time to fully understand the many aspects of a wood finishing operation. That's why we've designated a team of Wood Finishing Specialists with the knowledge and expertise you need to keep your finish line running as efficiently as possible. Please call our customer service representatives or your Binks or DeVilbiss Wood Finishing Specialist for further information.



Sap, Equalizer and Overall Stain are the first step toward achieving uniform color.

Application Equipment

SPRAY GUNS	TYPE AND DESCRIPTION	PATTERN SIZE @ 7-8" TARGET DISTANCE	PRESSURE OR SUCTION FEED	FLOW RATE	PART NUMBER FOR ORDERING
TGHV	Detail, Shading Mid Size	5" Max	P/S	Low	TGHV-530
	HVLP Spray Gun	5" Max	P/S	Medium	TGHV-530
Cub SL	Detail HVLP Spray Gun	8-10" Max	S	Low	Cub SL 30T/2S
		8-10" Max	S	Medium	Cub SL 40T/2S
		8-10" Max	S	High	Cub SL 55T/2S
MSV	Mid Size HVLP Spray Gun	11" Max	P	Low	MSV-531-3-46FX
		11" Max	P	Medium	MSV-531-3-46FF
		13" Max	P	High	MSV-531-3-83E
MACH 1SL	Slim Line HVLP Spray Gun	15" Max	P	Low	MACH 1 SL 91/93P
		15" Max	P	Medium	MACH 1 SL 94/94P
		15" Max	P	High	MACH 1 SL 97/97P
MAX	Composite Ergonomic HVLP Spray Gun	11" Max	P	Low	MAX-504-46FX
		11" Max	P	Medium	MAX-504-46FF
		13" Max	P	High	MAX-504-83E
JGA	Touch-Up HVLP Spray Gun	10" Max	S	Low	JGA -510-57D
		10" Max	S	Medium	JGA -510-57D

Fluid Delivery

GALLONS/DAY (USAGE)	FLUID DELIVERY SYSTEM	DESCRIPTION	PART NUMBER SYSTEM
0 to 1 Gallons	Suction Cup	8 Oz. Poly	TGS-503
	Suction Cup	1 Qt SS	TSC-595
	Suction Cup	1 Qt PTFE Lined	TLC-555
	Pressure Cup	2 Qt Agitated	80-351
2 to 15 Gallons	Pressure Tank	2 Gal SS with Dual Air Regulators	QMST-5220
	Pressure Tank	2 Gal SS with Dual Air Regulators and Agitator	QMST-5223
	Pressure Tank	5 Gal SS with Dual Air Regulators	QMST-5520
	Pressure Tank	5 Gal SS with Dual Air Regulators and Agitator	QMST-5523
10 to 55 Gallons	Non-Circulating Pump	Infinity 1/2" grounded Acetal Diaphragm Pump, 5 Gal Pail Mount with Fluid Regulator and 2 Air Controls. Pump Mounted on Cover.	818160
	Non-Circulating Pump	Infinity 1/2" SS Diaphragm Pump, 55 Gal Bung Mount with Mounting Plate and Hardware, Fluid Regulator and SS Siphon Tube With Strainer.	818170
55 Gallons	Non-Circulating Pump	Infinity "Pogo" 2:1 SS Barrel Piston Pump	812300
15 Gallons +	Non-Circulating Pump	Infinity 1" SS Diaphragm with Wall Mount Bracket, Fluid Regulator and 2 Air Controls.	818121
15 Gallons +	Circulating Pump	Infinity 1" SS Diaphragm Pump with Wall Mount Bracket, Fluid Regulator and 2 Air Controls.	818121

Note: Refer to the Binks Infinity Pumps Catalog for Gallons Per Minute (GPM) rating for each pump selection.

Washcoat & Sealer

Washcoats are applied before wiping stains and glazes to prevent them from “biting” into the wood. Washcoat also provides a base for subsequent applications such as glazes and sealers. *Sealer* seals off areas on a piece of wood that are prone to soak up too much stain (e.g. end grain). Failure to apply sealer at the appropriate places on the wood being sprayed can cause dark spots on the finished part.



We pioneered the development of truly ergonomic spray finishing equipment. In wood finishing where the worker's performance is closely linked with the overall success of the production line, good ergonomics can:

- Reduce material usage
- Continuously improve quality
- Reduce VOC's and waste disposal
- Comply with health and safety regulations
- Help retain good operators
- Reduce worker's compensation costs



Washcoat and Sealer keep the right amount of stain on the wood.

Application Equipment

SPRAY GUNS	TYPE AND DESCRIPTION	PATTERN SIZE @ 7-8" TARGET DISTANCE	PRESSURE OR SUCTION FEED	FLOW RATE	PART NUMBER FOR ORDERING
MSV	Mid Size HVLP Spray Gun	11" Max	P	Low/Medium	MSV-531-3-46FF
		13" Max	P	High	MSV-531-3-83E
MACH 1SL	Slim Line HVLP Spray Gun	15" Max	P	Low	MACH 1 SL 91/93P
		15" Max	P	Medium	MACH 1 SL 94/94P
		15" Max	P	High	MACH 1 SL 97/97P
MAX	Composite, Ergonomic HVLP Spray Gun	11" Max	P	Low/Medium	MAX-504-46FF
		13" Max	P	High	MAX-504-83E
MACH 3SL	Air Assisted Airless Spray Gun	10" Max	P	Medium/High	MACH 3 SL 93HA/10-518
Airless 1	Airless Spray Gun		P	High	Airless 1

Fluid Delivery

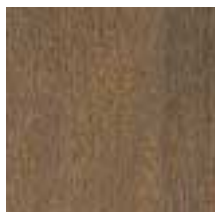
GALLONS/DAY (USAGE)	FLUID DELIVERY SYSTEM	DESCRIPTION	PART NUMBER FOR ORDERING
2 to 15 Gallons	Pressure Tank	2 Gal SS with Dual Air Regulators	QMST-5220
	Pressure Tank	2 Gal SS with Dual Air Regulators and Agitator	QMST-5223
	Pressure Tank	5 Gal SS with Dual Air Regulators	QMST-5520
	Pressure Tank	5 Gal SS with Dual Air Regulators and Agitator	QMST-5523
2 to 55 Gallons Low Pressure for HVLP Spray Guns	Non-Circulating Pump	Infinity 1/2" grounded Acetal Diaphragm Pump, 5 Gal Pail Mount with Fluid Regulator and Two Air Controls. Pump Mounted on Cover.	818160
	Non-Circulating Pump	Infinity 1/2" SS Diaphragm Pump, 55 Gal Bung Mount with Mounting Plate and Hardware, Fluid Regulator and SS Siphon Tube With Strainer.	818170
	Non-Circulating Pump	Infinity 1" SS Diaphragm Pump with Wall Mount Bracket, Fluid Regulator and 2 Air Controls.	818121
	Non-Circulating Pump	Infinity "Pogo" 2" 2:1 SS Barrel Piston Pump	812300
	Non-Circulating Pump	Infinity 11:1, 2 Ball SS Pump with Wall Mount Bracket, Muffler, Air Controls and SS Material Filter	812110
	Non-Circulating Pump	Infinity 23:1, 2 Ball SS Pump with Wall Mount Bracket, Muffler, Air Controls and SS Material Filter.	812130
High Pressure for Air Assist and Airless Spray Guns	Non-Circulating Pump (High Solids Only)	Infinity 45:1, 2 Ball SS Pump with Wall Mount Bracket, Muffler, Air Controls and SS Material Filter	812150
	Circulating Pump	Infinity 1" SS Diaphragm Pump with Wall Mount Bracket, Fluid Regulator and 2 Air Controls.	818121
High Pressure for Air Assist and Airless Spray Guns	Circulating Pump	Infinity 11:1, 2 Ball SS Pump with Wall Mount Bracket, Muffler, Air Controls and SS Material Filter	812110
	Circulating Pump	Infinity 23:1, 2 Ball SS Pump with Wall Mount Bracket, Muffler, Air Controls and SS Material Filter.	812130

Wiping Stain

Wiping Stain provides an additional layer of color. It also colors the pores in open-grained wood.



National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations have dictated many changes in wood finishing. We've teamed up with the AFMA, KCMA, and TRC Environmental to produce a comprehensive training program to assist wood product manufacturers in meeting NESHAP requirements. For further information about NESHAP class work, hands-on training, and course materials, contact your Binks or DeVilbiss Wood Finishing Specialist.



Wiping Stain provides an additional layer of color for open-grained wood.

Application Equipment

SPRAY GUNS	TYPE AND DESCRIPTION	PATTERN SIZE @ 7-8" TARGET DISTANCE	PRESSURE OR SUCTION FEED	FLOW RATE	PART NUMBER FOR ORDERING
MSV	Mid Size HVLP Spray Gun	11" Max	P	Low	MSV-531-3-46FX
		11" Max	P	Medium	MSV-531-3-46FF
		13" Max	P	High	MSV-531-3-83E
MACH 1SL	Slim Line HVLP Spray Gun	15" Max	P	Low	MACH 1 SL 91/93P
		15" Max	P	Medium	MACH 1 SL 94/94P
		15" Max	P	High	MACH 1 SL 97/97P
MAX	Composite Ergonomic HVLP Spray Gun	11" Max	P	Low	MAX-504-46FX
		11" Max	P	Medium	MAX-504-46FF
		13" Max	P	High	MAX-504-83E
Airless 1	Airless Spray Gun		P	High	Airless 1

Fluid Delivery

GALLONS/DAY (USAGE)	FLUID DELIVERY SYSTEM	DESCRIPTION	PART NUMBER FOR ORDERING
2 to 15 Gallons	Pressure Tank	2 Gal SS with Dual Air Regulators	QMST-5220
	Pressure Tank	2 Gal SS with Dual Air Regulators and Agitator	QMST-5223
	Pressure Tank	5 Gal SS with Dual Air Regulators	QMST-5520
	Pressure Tank	5 Gal SS with Dual Air Regulators and Agitator	QMST-5523
10 to 55 Gallons	Non-Circulating or Circulating Pump	Infinity 1" SS Diaphragm Pump with Wall Mount Bracket, Fluid Regulator and 2 Air Controls.	818121
	High Pressure for Air Assist and Airless Spray Guns	Non-Circulating Pump	Infinity 11:1, 2 Ball SS Pump with Wall Mount Bracket, Muffler, Air Controls and SS Material Filter
15 Gallons + HVLP	Circulating Pump	Infinity 4:1, 4 Ball SS Pump with Wall Mount Bracket, Muffler and Air Controls	814120
High Pressure for Air Assist and Airless Spray Guns	Circulating Pump	Infinity 11:1, 2 Ball SS Pump with Wall Mount Bracket, Muffler, Air Controls and SS Material Filter	812110

Note: Refer to the Binks Infinity Pumps Catalog for Gallons Per Minute (GPM) rating for each pump selection.

Highlighting Glaze

Highlighting Glaze provides an additional layer of color and colors the pores in open-grained wood.



Our Finish Room Audit Program helps wood furniture manufacturers conduct a full-scale audit of finishing operations to focus on overall performance as well as specific problems to improve the bottom line. We use a detailed checklist to evaluate quality issues, efficiency with finishing material, and regulation compliance issues and then provide detailed booth-by-booth recommendations for improving finishing operations. Manufacturers have saved thousands of dollars by implementing some of our audit team's recommendations.



Highlighting Glaze gives additional color to open-grained wood.

Application Equipment

SPRAY GUNS	TYPE AND DESCRIPTION	PATTERN SIZE @ 7-8" TARGET DISTANCE	PRESSURE OR SUCTION FEED	FLOW RATE	PART NUMBER FOR ORDERING
TGHV	Detail, Shading – Mid Size HVLP Spray Gun	5" Max	P/S	Low	TGHV-530
		5" Max	P/S	Medium	TGHV-530
		5" Max	P	High	TGHV-530
Cub SL	Detail HVLP Spray Gun	8-10" Max	S	Low	Cub SL 30T/2S
		8-10" Max	S	Medium	Cub SL 40T/2S
		8-10" Max	S	High	Cub SL 55T/2S
JGA	Touch-Up – HVLP Spray Gun	10" Max	S	Low	JGA -510-57D
		10" Max	S	Medium	JGA -510-57D
		10" Max	S	High	JGA -510-57D
MSV	Mid Size HVLP Spray Gun	11" Max	P	Low	MSV-531-3-46FX
		11" Max	P	Medium	MSV-531-3-46FF
		13" Max	P	High	MSV-531-3-83E
MACH 1SL	Slim Line HVLP Spray Gun	15" Max	P	Low	MACH 1 SL 91/93P
		15" Max	P	Medium	MACH 1 SL 94/94P
		15" Max	P	High	MACH 1 SL 97/97P
MAX	Composite Ergonomic HVLP Spray Gun	11" Max	P	Low	MAX-504-46FX
		11" Max	P	Medium	MAX-504-46FF
		13" Max	P	High	MAX-504-83E
Airless 1	Airless Spray Gun		P	High	Airless 1

Fluid Delivery

GALLONS/DAY (USAGE)	FLUID DELIVERY SYSTEM	DESCRIPTION	PART NUMBER FOR ORDERING
2 to 15 Gallons	Pressure Tank	2 Gal SS with Dual Air Regulators	QMST-5220
	Pressure Tank	2 Gal SS with Dual Air Regulators and Agitator	QMST-5223
	Pressure Tank	5 Gal SS with Dual Air Regulators	QMST-5520
	Pressure Tank	5 Gal SS with Dual Air Regulators and Agitator	QMST-5523
10 to 55 Gallons	Non-Circulating or Circulating Pump	Infinity 1" SS Diaphragm Pump with Wall Mount Bracket, Fluid Regulator and 2 Air Controls.	818121
	Non-Circulating Pump	Infinity 11:1, 2 Ball SS Pump with Wall Mount Bracket, Muffler, Air Controls and SS Material Filter	812110
High Pressure for Air Assist and Airless Spray Guns			
15 Gallons + HVLP	Circulating Pump	Infinity 4:1, 4 Ball SS Pump with Wall Mount Bracket, Muffler and Air Controls	814120
High Pressure for Air Assist and Airless Spray Guns	Circulating Pump	Infinity 11:1, 2 Ball SS Pump with Wall Mount Bracket, Muffler, Air Controls and SS Material Filter	812110

Note: Refer to the Binks Infinity Pumps Catalog for Gallons Per Minute (GPM) rating for each pump selection.

Speckling, Spattering, & Shading

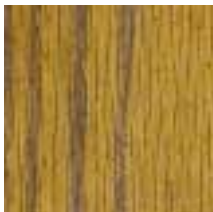
Speckling, Spattering, and Shading

add dimension and depth to the coating.

This creates a distressed, antique, and worn appearance to enhance the beauty of the finished piece.



Wood furniture manufacturers can realize large returns on both large and small finish line investments. In some cases, manufacturers who have made equipment investments as recommended following in-depth finish room audits have realized investment paybacks in just months. Improving efficiency is key to improving the bottom line. A comprehensive finish room audit by our Wood Finishing Team can help manufacturers to identify exactly where to make improvements.



Speckling, Spattering and Shading are final color steps that beautify wood finishes.

Application Equipment

SPRAY GUN	TYPE AND DESCRIPTION	PATTERN SIZE @ 7-8" TARGET DISTANCE	PRESSURE OR SUCTION FEED	FLOW RATE	PART NUMBER FOR ORDERING
MSA	Decorating Spray Gun	N/A	P	Low	MSA-510-DEC
TGHV	Shading HVLP Spray Gun	5" Maximum	P/S	Low	TGHV-530

Fluid Delivery

GALLONS/DAY (USAGE)	FLUID DELIVERY SYSTEM	DESCRIPTION	PART NUMBER FOR ORDERING
0 to 1 Gallon	Suction Cup	1 Qt SS	TSC-595
	Suction Cup	1 Qt PTFE Lined	TLC-555
	Pressure Cup	2 Qt Agitated	80-351
	Suction Cup	8 Oz. Poly	TGS-503
2 to 15 Gallons	Pressure Tank	2 Gal SS with Dual Air Regulators	QMST-5220
	Pressure Tank	2 Gal SS with Dual Air Regulators and Agitator	QMST-5223
	Pressure Tank	5 Gal SS with Dual Air Regulators	QMST-5520
	Pressure Tank	5 Gal SS with Dual Air Regulators and Agitator	QMST-5523

For precise control, use our Extra Sensitive Regulator, Part Number HAR-501. See page 9, DeVilbiss Clean Air Control Equipment Catalog, No. I-4057-E.

Top Coat & High Solids Top Coat

Top Coat provides build and protection, and brings out the beauty of the wood.



We are dedicated to incorporating the science of ergonomics into equipment design. In 1996, we received an IWF Challenger's Award for our efforts to design the industry's first truly ergonomic spray gun. Now a recognized leader in the ergonomics of wood finishing, we continue to set the standards for the marketplace.



Top Coat professionally enhances wood by creating a rich appearance.

Application Equipment

SPRAY GUNS	TYPE AND DESCRIPTION	PATTERN SIZE @ 7-8" TARGET DISTANCE	PRESSURE OR SUCTION FEED	FLOW RATE	PART NUMBER FOR ORDERING
MSV	Mid Size	11" Max	P	Low/Medium	MSV-531-3-46FF
	HVLP Spray Gun	13" Max	P	Medium	MSV-531-3-83E
MAX	Composite, Ergonomic	11" Max	P	Low/Medium	MAX-504-46FF
	HVLP Spray Gun	13" Max	P	Medium	MAX-504-83E
MACH 1SL	Slim Line HVLP Spray Gun	15" Max	P	Low	MACH 1 SL 91/93P
		15" Max	P	Low/Medium	MACH 1 SL 94/94P
		15" Max	P	Medium	MACH 1 SL 97/97P
MACH 3 SL	Ergonomic Air Assisted Airless Spray Gun	10" Max	P	Medium/High	Mach 3 SL 93HA/10-518
Airless 1	Airless Spray Gun		P	High	Airless 1

Fluid Delivery

GALLONS/DAY (USAGE)	FLUID DELIVERY SYSTEM	DESCRIPTION	PART NUMBER FOR ORDERING	
2 to 15 Gallons	Pressure Tank	2 Gal SS with Dual Air Regulators	QMST-5220	
	Pressure Tank	2 Gal SS with Dual Air Regulators and Agitator	QMST-5223	
	Pressure Tank	5 Gal SS with Dual Air Regulators	QMST-5520	
	Pressure Tank	5 Gal SS with Dual Air Regulators and Agitator	QMST-5523	
10 to 55 Gallons Low Pressure for HVLP spray Guns	Non-Circulating Pump	Infinity 1/2" ground Acetal Diaphragm Pump, 5 Gal Pail Mount with Fluid Regulator and Two Air Controls. Pump Mounted on Cover.	818160	
	Non-Circulating Pump	Infinity 1/2" SS Diaphragm Pump, 55 Gal Bung Mount with Mounting Plate and Hardware, Fluid Regulator and SS Siphon Tube With Strainer.	818170	
	Non-Circulating Pump	Infinity 1" SS Diaphragm Pump with Wall Mount Bracket, Fluid Regulator and 2 Air Controls.	818121	
	Non-Circulating Pump	Infinity "Pogo" 2" 2:1 SS Barrel Piston Pump	812300	
	Non-Circulating Pump	Infinity 23:1, 2 Ball SS Pump with Wall Mount Bracket, Muffler, Air Controls and SS Material Filter.	812130	
15 Gallons +	Circulating Pump	Infinity 1" SS Diaphragm Pump with Wall Mount Bracket, Fluid Regulator and 2 Air Controls.	818121	
	HVLP	Circulating Pump	Infinity 4:1, 4 Ball SS Pump with Wall Mount Bracket, Muffler and Air Controls	814120
15 Gallons +	Circulating Pump	Infinity 23:1, 2 Ball SS Pump with Wall Mount Bracket, Muffler, Air Controls and SS Material Filter.	812130	
	High Pressure for Air Assist and Airless Spray Guns	Circulating Pump*	Infinity 40:1, 2 Ball SS Pump	812410 (Bare Pump)
		Circulating Pump*	Infinity 45:1, 2 Ball SS Pump with Wall Mount Bracket, Muffler, Air Controls and SS Material Filter	812150

* Recommended for High Solids

Note: Refer to the Binks Infinity Pumps Catalog for Gallons Per Minute (GPM) ratings for each pump selection.

Repair

Operators use the *Repair* station to correct finishing defects that have occurred on the finish production line. Booths can be in- or off- line depending on the design of the finishing operation.



Spray finishing is more than just installing the right equipment for the job. Successful wood finishing also relies on talented, well-trained spray gun operators. For years, we've provided equipment, instructors, and technical know-how to community colleges, technical schools, and other trade programs to help train the next generation of finishing operators. We're proud of our efforts to help keep the finishing work force knowledgeable about the current technologies, regulations, and techniques in wood finishing.



Application Equipment					
SPRAY GUNS	TYPE AND DESCRIPTION	PATTERN SIZE @ 7-8" TARGET DISTANCE	GRAVITY, PRESSURE OR SUCTION FEED	FLOW RATE	PART NUMBER FOR ORDERING
JGA	Suction Feed HVLV Spray Gun	10" Max	S	Low/Med	JGA-510-57D
EGHV	Detail/Touch-Up HVLV Spray Gun	6" Max	S/P	Low	EGHV-531-397E
GTi	Gravity Feed HVLV Spray Gun	9" Max	G	Low/Med	GTi-600G

Fluid Delivery			
GALLONS/DAY (USAGE)	FLUID DELIVERY SYSTEM	DESCRIPTION	PART NUMBER FOR ORDERING
0 to 1 Gallon	Suction Cup	1 Qt. SS	TSC-595
	Suction Cup	1 Qt. PTFE Lined	TLC-555
	Suction Cup	8 Oz. Poly	TGS-503
	Gravity Feed Cup	32 Oz. Aluminum	GFC-502
10 Gallons +	Non-Circulating Pump	Infinity "N" Series 28:1 2 Ball SS Pump with Wall Mount Bracket, 2 Air Controls and Integrated Muffler	812190
	Non-Circulating Pump	Infinity "N" Series 28:1 2 Ball SS Pump with Cart, 2 Air Controls and Integrated Muffler	812180

Note: Refer to the Binks Infinity™ Pumps Catalog for Gallons Per Minute (GPM) rating for each pump selection.



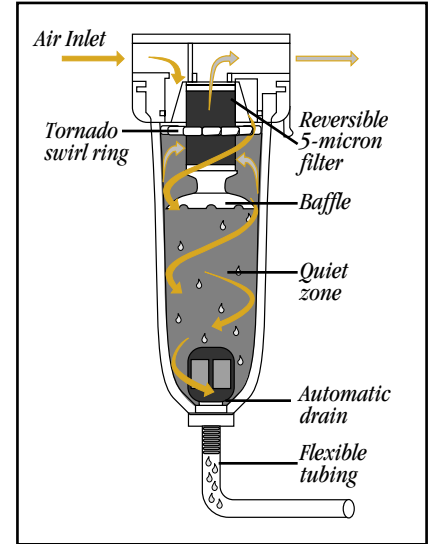
Repair stations eliminate small production line defects or damage as shown at left.

Accessories

Centrifugal Filter-Regulator Units

PART NO.	HFRL-511
Filtering Capacity (micron)	5
Flow Rate (CFM)	120+
Max. Inlet Pressure (psi)	150
Regulated Pressure Range (psi)	0 – 125
Max. Operating Temp.	150°F
Inlet Port Size	3/4" NPT (F)
Regulated Outlets (w/ ball valve)	(4) 1/4" NPS (M)
Non-Regulated Outlets (w/ ball valve)	(1) 1/4" NPS (M)
Bowl Capacity	34 oz.
Air Filter Included	HAF-503
Quantity of Air Regulators/Model	(2) HAR-507
Air Gauges (0 – 100 psi)	2
Air Gauges (0 – 160 psi)	1
Shipping Weight	18 lbs.
Service Bulletin	SB-6-148

Note: For optional air regulators and filters, refer to the DeVilbiss Clean Air catalog I-4057.



Tornado-like swirling action removes moisture which collects in the baffled "quiet zone." The reusable 5-micron filter catches smaller impurities. Accumulated liquid is carried away by the automatic drain.

Simple, easy-to-use cleaners speed up equipment cleaning and save solvent (up to 86% savings!), which reduces V.O.C. emissions. Operate with compressed air. Provides a blast of

solvent/air traveling through fluid passages of spray guns, hoses, etc. Metering permits varying air/solvent mix. Equipped with safety valve. 1/4" NPS (M) air and 3/8" NPS (M) fluid connections.

Solvent Savers™ Hose/Gun Cleaners

PART NO.	CAPACITY	SHIP WT. (LBS.)	MAX. WORKING PRESSURE	MATERIAL CONSTRUCTION (IN CONTACT W/FLUID)
*HD-503	2 qt.	5	50 psi	Aluminum, nickel plated brass, PTFE and Thiokol gasket
*QMGZ-5200	2 gal.	38	110 psi	Galvanized steel, aluminum, nickel plated brass, PTFE & Santoprene gaskets, polyethylene tank liner

*Note: Not suitable for use with chlorinated solvents, such as 1,1,1 trichloroethane or methylene chloride.



Accessories

Paint Drum Agitator Drive QS-5003

For use with paint drums having built-in agitators. Powerful variable speed air motor. Requires 5 to 8 CFM of air for 50 RPM of agitator; adjustable from 10 RPM up. Air connection 1/4" NPS(M). Includes couplings to fit 7/16" and 1/2" agitator shafts. The mounting adapter fits both 1-1/2" and 2" threads. Shipping weight: 15 lbs.



Air Cap Test Kits

Air cap test kits may be required by some air quality agencies. These kits are supplied with a special air cap and test gauge to demonstrate actual pressure being used at the cap since it will vary depending on hose length between the air regulator and gun. These kits can be used as a quality control device for consistent spraying each day. These cap kits should not be used when finishes are being applied.

PART NO.	DESCRIPTION
KK-5033-46MP	46MP Air Cap Test Kit
OMX-5033-46MP	46MP Air Cap Test Kit (MAX Gun)
KK-5033-83MP	83MP Air Cap Test Kit
OMX-5033-83MP	83MP Air Cap Test Kit (MAX Gun)
KK-5033-397HV	397 Air Cap Test Kit
KK-5033-90HV	90 Air Cap Test Kit
54-4356	93P Air Cap Test Kit
54-4066	94P Air Cap Test Kit
54-3935	97P Air Cap Test Kit
54-4150	2S Air Cap Test Kit
54-3622	93HA Air Cap Test Kit
54-3774	95HA Air Cap Test Kit

HGB-508

Fluid Pressure Regulator Assembly

For manual or remote air control operation. The highly sensitive Nylon II diaphragm reacts instantly to pressure variation to assure constant, correct pressure at spray gun take-off points on pumps or in circulating systems – with up to 8 gallons per minute fluid flow. HGB-508 is corrosion resistant with a 303 stainless steel body.

Includes:

- HGB-502 – Stainless steel fluid regulator
- HGB-14 – Riser tube with GA-33 gauge
- 3/8" Stainless steel swivel inlet fitting
- 3/8" Stainless steel outlet nipple



Fluid Regulator

MODEL PART NO.	MATERIAL (WETTED PARTS)	INLET/OUTLET PORTS	INLET PRESSURE MAX.	REG. OUTLET PRESSURE	MAX. REG. FLUID FLOW	MAX TEMP.	APPROX. SHIP WT.
HGB-508	Stainless Steel body or PTFE and Nylon body	3/8" NPS (F) inlet 3/8" NPS (M) outlet	175 psi	0–75 psi	8 gal./min.	180°F	3 lbs.

Accessories

Downstream Fluid Regulators – Medium Flow

MODEL NUMBER	BODY/ BALL & SEAT (SEE CODE AT BOTTOM)	REGULATED PRESSURE RANGE PSI (BAR)	WORKING PRESSURE W/GAUGE PSI (BAR)	MAXIMUM INLET PRESSURE PSI (BAR)
1/4" ports, medium pressure to 1 GPM (3.785 liters)				
84-420	S/S, T/C	300–2000	3000	3500
84-520	S/S, T/C	100–900	1000	3500

3/8" ports, medium pressure to 3 GPM (11.4 liters)				
845010	S/S, T/C	400–1250 (27.2–83)		3000 (204)
845011	S/S, T/C	1000–3000 (59–207)		6000 (408)

Downstream Fluid Regulators – High Flow

MODEL NUMBER	BODY/ BALL & SEAT (SEE CODE AT BOTTOM)	REGULATED PRESSURE RANGE PSI (BAR)	WORKING PRESSURE W/GAUGE PSI (BAR)	MAXIMUM INLET PRESSURE PSI (BAR)
3/8" ports, high pressure to 6 GPM (22.7 liters)				
845001	S/S, T/C	100–800 (7–55)	1250 (85)	1250 (85)
845013	S/S, T/C	2000–5000		6000

Back Pressure Fluid Regulators

MODEL NUMBER	BASE HOUSING SEAT (SEE CODE AT BOTTOM)	REGULATED PRESSURE RANGE PSI (BAR)	WORKING PRESSURE W/GAUGE PSI (BAR)	MAXIMUM INLET PRESSURE PSI (BAR)
1/4" ports, medium pressure regulator				
84-421	T/C	300–2000	3000	3500
84-521	T/C	100–900	1000	3500

1/2" port, low shear to 1 GPM (3.78 liters)				
84-601	S/S, S/S	0–200 (0–14)	200 (14)	200 (14)

3/8" ports, high-flow to 6 GPM (22.7 liters)				
845000	S/S, T/C	0–200 (0–14)	200 (14)	200 (14)
845002	S/S, T/C	0–800 (0–14)	800 (55)	800 (55)
845012	S/S, T/C	1000–3000	3000	300

3/4" ports, high-flow to 11 GPM (41.6 liters)				
84-404	S/S, S/S	10–140	150	150
Optional Gauge: 84-246 (0 – 200 Psi Ga)				

1-1/4" ports, system-flow** to 18.5 GPM (701 liters)				
845003	S/S, T/C	0–200 (0–14)	200 (14)	200 (14)

Material Codes: T/C Tungsten Carbide, S/S Stainless Steel

** Flow rates tested in 55 CPS Material.

Low Pressure
845001
(with Gauge)



High Pressure
845010
845011
845013
(without Gauge)



Optional Gauges
101-3069
84-491

84-420
84-421
84-520
84-521
(Shown with gauge
84-420 – not
included)

845000
845002
(with Gauge)



84-504
(without Gauge)

Accessories

Fluid Hose

Recommended Use – Nyliner II fluid hose is ideal for use with a wide range of materials such as resins and solvents contained in latices, epoxies, urethanes, alkyds, primers, acrylics, polyesters, silicones, bitumastic coatings, oil and water based paints, lacquers, alcohol and latex coatings.

Tube – Nylon.

Reinforcement – High tensile strength yarn.

Cover – Neoprene rubber.

Additional information regarding connections and hoses can be found in the DeVilbiss Air & Fluid Hose Catalog, No. I-5005.



Bulk Hose Chart – Fluid

SIZES AVAILABLE		BULK HOSE NUMBER	MAXIMUM WORKING PRESSURE (PSI)	FEET PER REEL*	APPROX. SHIPPING WEIGHT BASED ON AVG. FEET PER REEL	HOSE WEIGHT PER 100 FEET	CONNECTION
I.D.	O.D.						
1/4"	1/2"	H-1975-1	500	400–650	60 lbs.	10 lbs	P-HC-4543

* Maximum of 3 pieces per reel; minimum piece length 50 ft.

Air Hose

Our engineers and designers have made the best even better! Compare DeVilbiss' new 3/8" I.D. ErgoFlex hose with any other hose and see for yourself.

There's a difference you can see. A difference you can feel. Here's what makes ErgoFlex the better hose:

- 40% lighter weight than standard 3/8" I.D. air hose & fittings
- More flexible than 1/4", 5/16" and 3/8" I.D. air hose
- Durable, solvent resistant outer covering (exclusive ErgoFlex tan color)
- 200 psi working pressure
- 800 psi burst pressure

- New one-piece, reusable connection
- No outside clamp or locking device required
- Conductive core, dissipates static build-up at air tool

Recommended Use – ErgoFlex hose is suitable for use with all kinds of air-operated equipment, including those requiring lubricant in the air line, or in environments where oil and grease are present.

Tube – Synthetic rubber compound. Excellent oil and water resistance. Conductive for static charge dissipation.

Reinforcement – High tensile strength Kevlar®, specially designed for maximum flexibility (under pressure) and maximum coupling retention.



Cover – Smooth, tan color synthetic rubber compounded with superior resistance to oil, weathering, ozone and abrasion.

Connection – One-piece reusable. (P-HC-4854) I.D. Size – 3/8"

Bulk Hose Chart – Air

SIZES AVAILABLE		BULK HOSE NUMBER	MAXIMUM WORKING PRESSURE (PSI)	FEET PER REEL**	APPROX. SHIPPING WEIGHT BASED ON AVG. FEET PER REEL	HOSE WEIGHT PER 100 FEET	CONNECTION
I.D.	O.D.						
3/8"	.650"	H-3670	200	700	95 lbs.	12 lbs.	P-HC-4854

** Supplied in one continuous 700 ft. piece.

Fluid Conditioning

Fluid Heaters & Accessories

Typically used with sealers and top coats. High-pressure, lightweight, compact & explosion-proof construction. Working capacity to 5000 PSI and with adjustable thermostatic control from 60° to 250°F. The typical temperature rise with a flow of 15 gallons per hour is 100°F.

830000

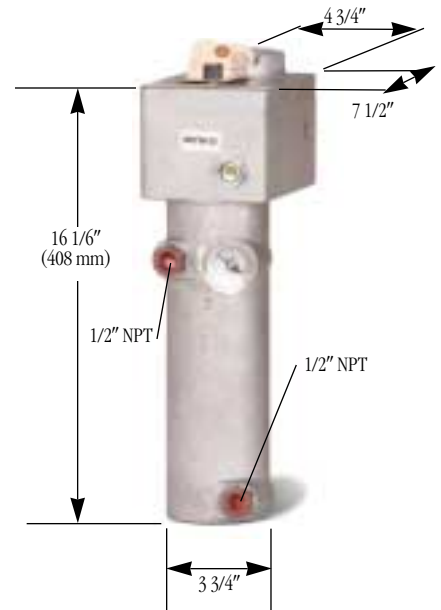
Fluid Heater2000 watts
 BodyStainless Steel
 W/PSI5000 (340 bars)
 Voltage120 (16.6 AMPS)

830001

Fluid Heater2000 watts
 BodyStainless Steel
 W/PSI5000 (340 bars)
 Voltage240 (8.33 AMPS)

830002

Fluid Heater2000 watts
 BodyStainless Steel
 W/PSI5000 (340 bars)
 Voltage440 (4.5 AMPS)



Troubleshooting Spray Pattern Defects

Problem	Cause	Solution
Heavy top or bottom pattern.	Horn holes plugged.	Clean. Ream with non-metallic point.
	Obstruction on top or bottom of fluid tip.	Clean.
	Cap and/or tip seat dirty.	Clean.
Heavy right or left side pattern.	Left or right side horn holes plugged.	Clean. Ream with non-metallic point.
	Dirt on left or right side of fluid tip.	Clean.
Heavy center pattern.	Fluid pressure too high for atomization air (pressure feed).	Balance air and fluid pressure. Increase spray pattern width with spreader adjustment valve.
	Material flow exceeds air cap's capacity.	Thin or lower fluid flow.
	Atomizing pressure too low.	Increase pressure.
	Material too thick.	Thin to proper consistency.
Split spray pattern.	Fluid adjusting knob turned in too far.	Back out counterclockwise to achieve proper pattern.
	Atomization air pressure too high.	Reduce at transformer.
	Fluid pressure too low (pressure feed only).	Increase fluid pressure.
	Spreader adjusting valve set too high.	Adjust.

Troubleshooting Spray Pattern Defects

Problem	Cause	Solution
Jerky or fluttering spray.	Loose or damaged fluid tip/seat.	Tighten or replace.
<i>Suction & Pressure Feed</i>	Material level too low.	Refill.
	Container tipped too far.	Hold more upright.
	Obstruction in fluid passage.	Backflush with solvent.
	Loose or broken fluid tube or fluid inlet nipple.	Tighten or replace.
	Dry or loose fluid needle packing nut.	Lubricate or tighten.
Jerky or fluttering spray. <i>Suction Feed Only</i>	Material too heavy.	Thin or replace.
	Container tipped too far.	Hold more upright.
	Air vent in cup lid clogged.	Clear vent passage.
	Loose, damaged or dirty lid.	Tighten, replace or clean coupling nut.
	Dry or loose fluid needle packing.	Lubricate or tighten packing nut.
	Fluid tube resting on cup bottom.	Tighten or shorten.
	Damaged gasket behind fluid tip.	Replace gasket.
Unable to get round spray pattern.	Fan adjustment screw not seating properly.	Clean or replace.
	Air cap retaining ring loose.	Tighten.
Will not spray.	No air pressure at gun.	Check air supply and air lines.
	Internal mix or pressure feed air cap and tip used with suction feed.	Change to proper suction feed air cap and tip.
	Fluid pressure too low with internal mix cap and pressure tank.	Increase fluid pressure at tank.
	Fluid needle adjusting screw not open enough.	Open fluid need adjusting screw.
	Fluid too heavy for suction feed.	Thin material or change pressure feed.

General Troubleshooting

Problem	Cause	Solution
Starved spray pattern.	Inadequate material flow.	Back fluid adjusting screw out to first thread, or increase fluid pressure at tank.
	Low atomization air pressure (suction feed).	Increase air pressure and rebalance gun.
Excessive overspray.	Too much atomization air pressure.	Reduce pressure.
	Gun too far from work surface.	Adjust to proper distance.
	Improper stroking (arcing, gun motion too fast).	Move at moderate pace, parallel to work surface.
Excessive fog.	Too much or too fast – drying thinner.	Remix properly.
	Too much atomization air pressure.	Reduce pressure.
Dry spray.	Air pressure too high.	Decrease air pressure.
	Material not properly reduced (suction feed).	Reduce to proper consistency.
	Gun tip too far from work surface.	Adjust to proper distance.
	Gun motion too fast.	Slow down.
	Gun out of adjustment.	Adjust.
Fluid leaking from packing nut.	Packing nut loose.	Tighten. Do not bind needle.
	Packing worn or dry.	Replace or lubricate.
Fluid leaking or dripping from front of pressure feed gun.	Packing nut too tight.	Adjust.
	Dry packing.	Lubricate.
	Fluid tip or needle worn or damaged.	Replace tip and needle with lapped sets.
	Foreign matter in tip.	Clean.
	Fluid needle spring missing or broken.	Replace.
	Wrong size needle or tip.	Replace.
	Needle bound by misaligned sprayhead (MBC guns only).	Tap sprayhead perimeter with a wooden mallet. Retighten lock bolt.

General Troubleshooting

Problem	Cause	Solution
Runs and sags.	Too much material flow.	Adjust gun or reduce fluid pressure.
	Material too thin.	Mix properly or apply light coats.
	Gun tilted on an angle.	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.	Check distance. Normally 6 – 8" for HVLP and 8 – 10" for conventional.
	Too much air pressure.	Reduce air pressure and check spray pattern.
	Improper thinner being used.	Follow paint manufacturer's mixing instructions.
Thick, dimpled finish ("orange peel"). Too much material coarsely atomized.	Gun too close to surface.	Check distance. Normally 6 – 8" for HVLP and 8 – 10" for conventional.
	Air pressure too low.	Increase air pressure or reduce fluid pressure.
	Improper thinner being used.	Follow paint manufacturer's mixing instructions.
	Material not properly mixed.	Follow paint manufacturer's mixing instructions.
	Surface rough, oily, dirty.	Properly clean and prepare.

Complete Product Literature For Easy Reference

To learn more about our products, contact your Binks or DeVilbiss Finishing Specialist for complete product literature. Or, contact us directly at 1-800-992-4657. For online product and application information, please visit our web sites – www.binks.com or www.devilbiss.com.



DeVilbiss Maximum Performer™ HVL P Spray Guns Catalog
I-2155-C



DeVilbiss Conventional Air Spray Guns and Accessories
I-2008-I



DeVilbiss Tanks and Cups Catalog
I-3018-K



DeVilbiss CleanAir™ Air Control Equipment Catalog
I-4057-E



DeVilbiss Air & Fluid Hose Catalog
I-5005-H



Binks HVL P Spray Guns Catalog
HVL P1-R



Binks Conventional Spray Guns Catalog
A54-19R-15



Binks Infinity Pumps Catalog
A98-29R-11



Binks Pressure Tanks Catalog
A83-9

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