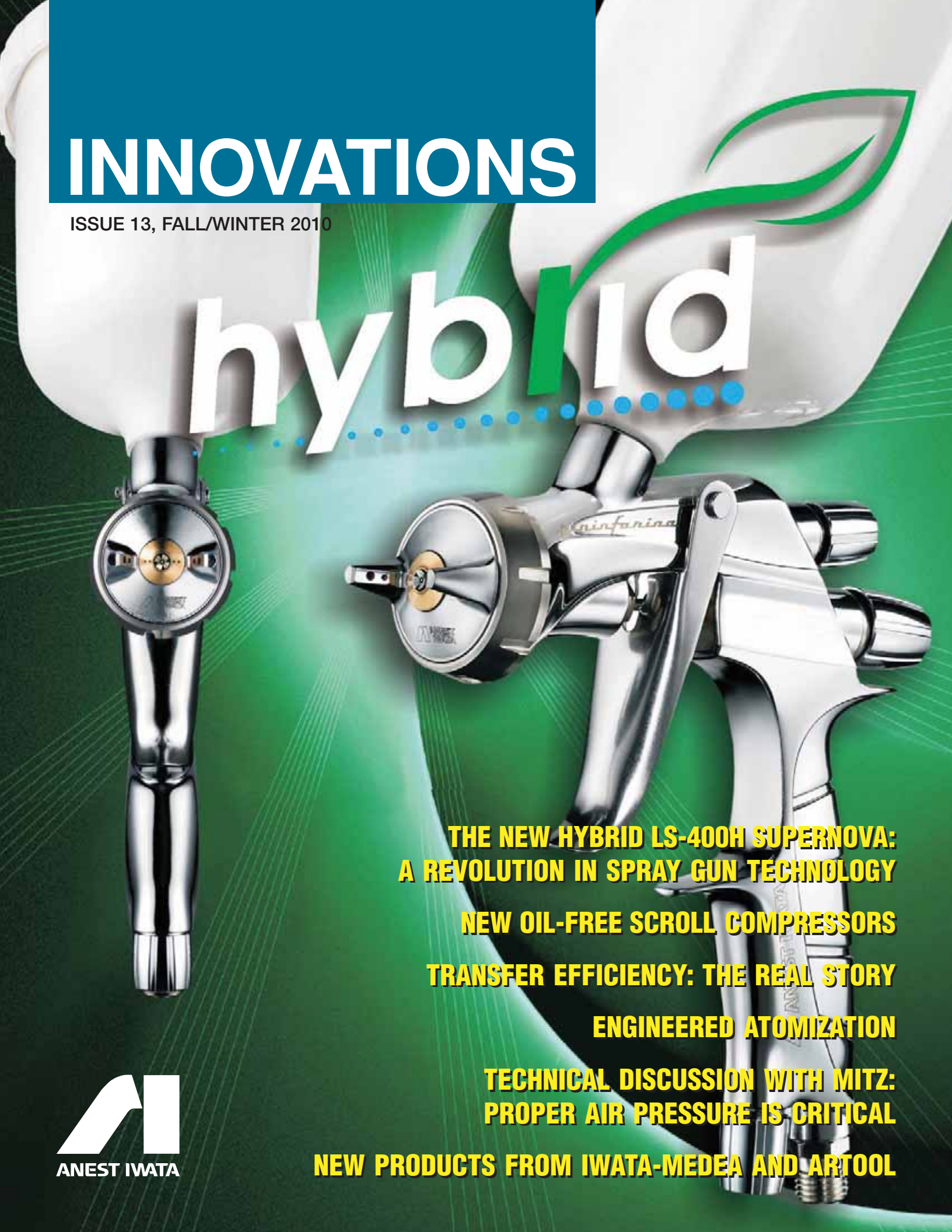
INNOVATIONS

ISSUE 13, FALL/WINTER 2010



THE NEW HYBRID LS-400H SUPERNOVA:
A REVOLUTION IN SPRAY GUN TECHNOLOGY

NEW OIL-FREE SCROLL COMPRESSORS

TRANSFER EFFICIENCY: THE REAL STORY

ENGINEERED ATOMIZATION

TECHNICAL DISCUSSION WITH MITZ:
PROPER AIR PRESSURE IS CRITICAL

NEW PRODUCTS FROM IWATA-MEDEA AND ARTOOL

ANEST IWATA

ANEST IWATA USA, Inc.
9920 Windisch Road
West Chester, OH 45069
Tel: 513.755.3100
Fax: 513.755.0888
www.anestiwata.com

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TELL US WHAT YOU THINK!

We're open to suggestions for article ideas and photo opportunities.

Call **513-755-3100** or e-mail inquiry@anestiwata.com

INNOVATIONS

IN THIS ISSUE

In this thirteenth installment of *INNOVATIONS*, we will focus on our new **HYBRID LS-400H SUPERNOVA** spray gun. We will also present:

- Engineered Atomization with our patented **LV Technology**.
- The real story about transfer efficiency.
- A recap of IWF 2010, and a preview of SEMA 2010 and Fox Marketing's Lexus LS600 HL hybrid.
- New **SmartAir** oilfree scroll compressors, coming soon from ANEST IWATA.
- Tchnical discussion with "Mitz" about proper air pressure settings.
- New Bubble FX™ templates from Artool and Dennis Mathewson, and a new airbrush techniques book and exercise kit from Iwata-Medea and Robert Paschal.

ANEST IWATA USA, INC.

A LETTER FROM THE PRESIDENT

What's next from ANEST IWATA?

Last fall, I talked about our latest INNOVATION: the **SUPERNOVA** designed by world-renowned industrial designing firm Pininfarina, famous for their state of the art automobile design. Now, superior atomization technology is combined with excellent design.

Keeping true to our corporate environmental statement, we always strive to improve on our technology. This year, I would like to introduce you to our latest INNOVATION: the **HYBRID LS-400H SUPERNOVA**.

We told our engineers that we needed a new gun to be HVLP with the speed of compliant or conventional guns. As always, they exceeded our expectations with this new technology, combining our LV Technology's superior atomization, transfer efficiency and speed into the state of the art design gun body. This hybrid technology will revolutionize the spray gun industry.

Our intention is that you find our new spray gun to be another innovative creation by ANEST IWATA. Keep yourself tuned in. We will continue to strive and create something new. I hope you enjoy *INNOVATIONS*!

Satoru Iwata, President
ANEST IWATA USA, Inc.

IWF 2010 RECAP

ANEST IWATA USA, Inc. participated in the 2010 International Woodworking Machinery & Furniture Supply Fair–USA®. Visitors from over 80 countries and all 50 states were in attendance at one of the largest woodworking trade shows in the world. 972 companies were on hand exhibiting with over 800,000 net square feet of product displays.

ANEST IWATA showcased our industrial line of equipment including our new Glazing Gun, 2 gallon dual regulated commercial pressure pot, and our Waterborne electrostatic gun. We also had on hand our 13:1 air-assisted airless system with the new MSG-200B spray gun. This system provides a great solution for waterborne stains and topcoats. Some of the other highlights were our double diaphragm pumps and extension guns.

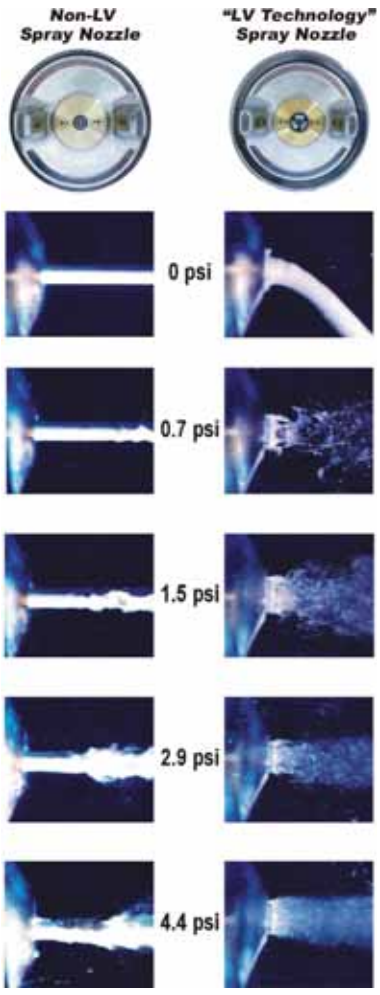
Although the show as a whole didn't set any attendance records, we noticed steady booth traffic and a more motivated buyer profile. With the hard economic times facing the industry, the companies visiting IWF kept the travel numbers down and only sent users and decision-makers. This made for a very satisfying show experience for our employees and our distributors across North America. Thank you to all of our distributors and end users who visited our booth during the 2010 IWF show!

ENGINEERED ATOMIZATION

PATENTED LV TECHNOLOGY

ANEST IWATA's patented LV Technology is setting the standard by which all other spray guns are measured while turning paint into profit. This exciting technology is a natural evolution in ANEST IWATA's continuing commitment to providing the best spray solutions for our customers.

The unique technology creates a double "engineered atomization" process within the sprayed coating. **LV Technology** works by focusing air down the special slits in the fluid nozzle that direct air towards the center of the nozzle orifice. This change in direction also causes the air stream to speed up, meeting the fluid in the center of the tip where a powerful pulverization of the fluid occurs. This pulverization is the pre-atomizing step which expands the paint stream 4 to 5 times that of the fluid opening and it is now a mixture of air and paint rather than fluid only. This air and paint mixture is much easier for the main atomization to break up, resulting in lower gun operating pressures. The secondary air cap piercings then complete the main atomization.



The many benefits of **LV Technology** include better appearance, better through dry, and better transfer of the material to the surface. Solvents that do not escape the film before drying or curing cause many common paint defects. Solvent pop, die back, shrinking, loss of gloss, softness of film, etc. are all defects caused by solvents remaining in the paint film. The ANEST IWATA **LV Technology** pre-atomization theory minimizes these problems because the in-flight loss of solvent is greater than with other technologies. Painters who have made the switch to **LV Technology** notice a significant reduction in product consumption and better appearance. Our patented **LV Technology** is available in HVLP and compliant high transfer efficiency spray equipment. Pressure, gravity and siphon spray guns are available with this technology.

0 psi: Note the fluid velocity of the LV spray nozzle has long dwell time in the atomization area. This is because of the concave design of the fluid nozzle.

0.7 psi: Notice how the fluid stream is starting to shred and break up these ligaments of fluid this is the pre-atomization process. Air comes around the tip and then is directed by the slits to the center of the nozzle that creates the breakup. This is less than 7/10 of 1 psi.

4.4 psi: The fluid is pre-atomized and awaiting the main atomization from the air cap to break up even further. Note that the non-LV tip is just starting to cut the fluid.

TRANSFER EFFICIENCY: THE REAL STORY

RAY ODETTE

"What percent does your gun transfer?"

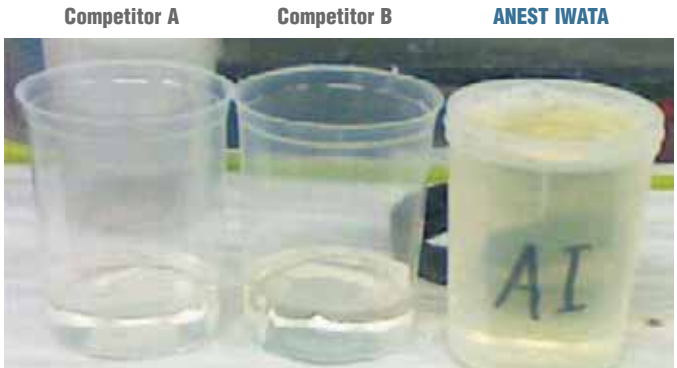
As a spray gun manufacturer, we hear that a lot. It is mostly subjective to the person on the end of the handle. Transfer efficiency testing is done in an environment where almost everything is controlled: exacting distances, air flow, angles, temperatures, etc. ANEST IWATA has done several tests with various testing facilities across the world, including Thatcham and the U.S. EPA. (Visit http://www.epa.gov/etv/vt-ppc.html#htepsg for the EPA testing and results.) The percent transfer question can be somewhat misleading to the one doing the painting. I hope that this article will shed some light on a question that is asked very frequently.

Most shops and manufacturers are well aware of paint costs; some new pigments and performance clear coats can have costs that are many times more than standard white or silver. Shops and refinishers are becoming well aware of these costs, and are working on solutions to address this. ANEST IWATA has been aware of this concern, and has developed products and solutions to assist the shop with solutions to become more profitable while still offering the high quality performance finishing systems to their customers. The **Anest Iwata Challenge** was one of these solutions. We attained many new customers who took the challenge and found improved quality and lower maintenance of both equipment and spray guns, as well as significant material savings, in most cases over 20% comparing previous material hour usage to material hour usage after the Challenge. It is our opinion that the material hour expense is the true measurement of efficiency for the Real World. It is how we evaluate the additional savings by using our equipment.

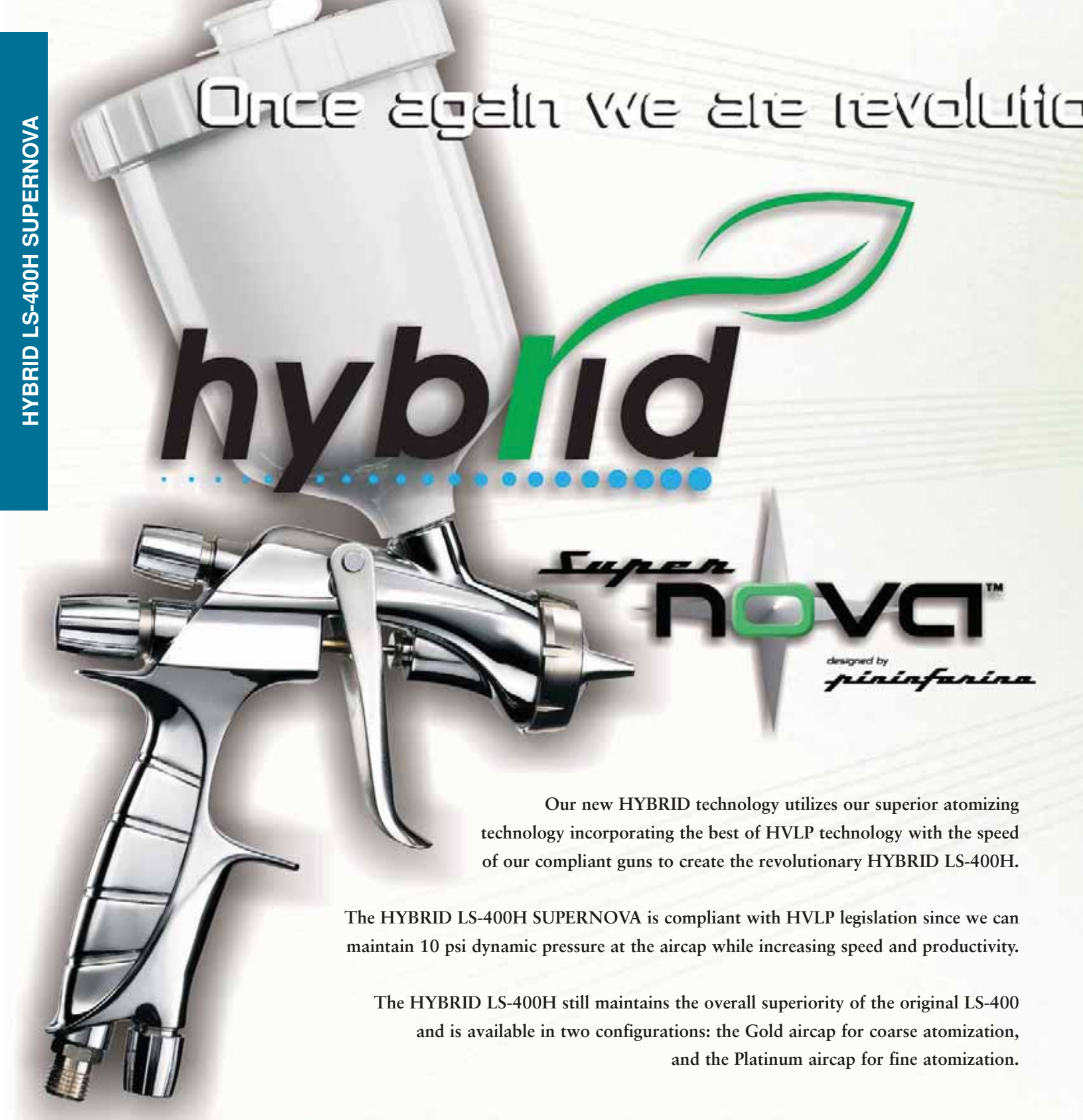
Why? Why should this equipment make that kind of Real World difference? It is because the equipment is engineered to do so. The LV dual atomization, the tulip-shaped fan, lower pressures, and the new **HVLP / Compliant HYBRID** design (coming soon) for the **SUPERNOVA** all combine to make this benefit occur.

A significant amount of shops in North America are standardizing procedures for as many shop functions as they can. ANEST IWATA has seen many customers standardize with our spray guns from the priming stage to the clearcoat stage with tremendous material savings and improved quality. In the past, painters purchased equipment, and the shop utilized what the painter was spraying. ANEST IWATA's goal is to provide the painter with products that are preferred over other competitive choices, and provide the material savings benefit to the shop owner. Significant developments in ANEST IWATA's products and performance keep pushing the performance bar upward. Fancy decorated guns look nice, but should not suffice for value with engineering ideas and solutions to paint technologies today and tomorrow.

If you are interested in exploring the **Anest Iwata Challenge**, please contact your wholesaler or your ANEST IWATA sales representative.



Test conducted using compliant guns from three major gun companies. 3 GM S-10 front clips were cleared, same painter, same clear coat, similar application times, similar film builds. ANEST IWATA had the best appearance, and used almost 30% less materials than our competitors. Two coats were applied, and the picture is the balance left over after 3 full cups were used of product. The picture represents the leftover clear in the third cup.



Our new HYBRID technology utilizes our superior atomizing technology incorporating the best of HVLP technology with the speed of our compliant guns to create the revolutionary HYBRID LS-400H.

The HYBRID LS-400H SUPERNOVA is compliant with HVLP legislation since we can maintain 10 psi dynamic pressure at the aircap while increasing speed and productivity.

The HYBRID LS-400H still maintains the overall superiority of the original LS-400 and is available in two configurations: the Gold aircap for coarse atomization, and the Platinum aircap for fine atomization.

Model	Gun Only	PCG600P-2 600ml Plastic #6035	PCG7D-2 700ml Alum #6032D	PCG10E-2 1000ml Alum #6038	Air Cap # Inside Air Cap (PSI)	Nozzle mm (inch)	Atomizing PSI	CFM	Fluid ml/min	Pattern mm (inch)	Weight g (lbs)	Application
HVLP-Hybrid Coarse Atomization												
LS400-1303	5850	5851	5852	5853	LS-400-03 BASECOAT / COARSE GOLD (10 PSI)	1.3 (0.051)	25	13.73	145	290 (11.40)	423 (0.93)	Automotive refinish Basecoats / General Purpose
LS400-1403	5855	5856	5857	5858		1.4 (0.055)		13.73	155	300 (11.80)		Automotive refinish Basecoats / General Purpose
Aircap HVLP-Hybrid Test Gauge Part #2976												
HVLP-Hybrid Fine Atomization												
LS400-1304	5865	5866	5867	5868	LS-400-04 CLEARCOAT / FINE PLATINUM (10 PSI)	1.3 (0.051)	25	13.73	145	290 (11.40)	423 (0.93)	Automotive refinish Clearcoats / General Purpose
LS400-1404	5870	5871	5872	5873		1.4 (0.055)		13.73	155	300 (11.80)		Automotive refinish Clearcoats / General Purpose
Aircap HVLP-Hybrid Test Gauge Part #2977												

...nizing spray gun technology!

LS-400H

PERFECT BALANCE

The **SUPERNOVA** cup angle design guarantees perfect balance, regardless of what cup size you choose.

QUICK RELEASE AIR CAP

The larger thread pattern of the air cap makes it both robust and easy to remove, and is designed with low maintenance in mind. The new larger grip points on the outside of the air cap ring facilitate quick removal and refitting after cleaning.

RESPONSIVE TRIGGER

The responsive trigger action gives the painter stable airflow control during application. Accurate air pressure can now be set with either the air stroke or the fluid stroke.

ERGONOMIC GRIP

An in-depth study by the University of Pavia into perfect balance and optimal ergonomics was closely considered by Pininfarina designers and ANEST IWATA engineers to produce a state-of-the-art spray gun. The slim ergonomic grip of the **SUPERNOVA** spray gun helps distribute weight and balance through the wrist, reducing the risk of repetitive strains,

PERFORMANCE

The **SUPERNOVA** delivers a consistent droplet size when atomizing. This, combined with the flat, even **SUPERNOVA** pattern, helps application issues. All **SUPERNOVA** guns are equipped with stainless steel fluid passages ideal for any type of material, solvent-borne or waterborne.

SPRAYING ADHESIVES

OR OTHER NON-FINISH COATINGS

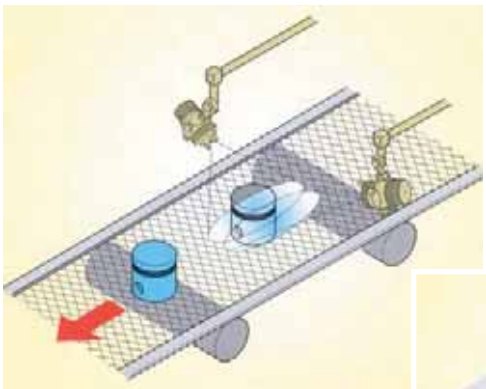
If a fine finish is not your ideal end result, why spend the money on a spray gun made for such applications?

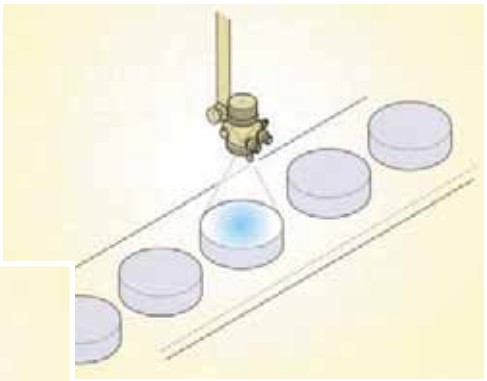
ANEST IWATA has a wide range of affordable hand and automatic conventional air spray guns that perform extremely well with mold release, adhesives and other general spray applications.

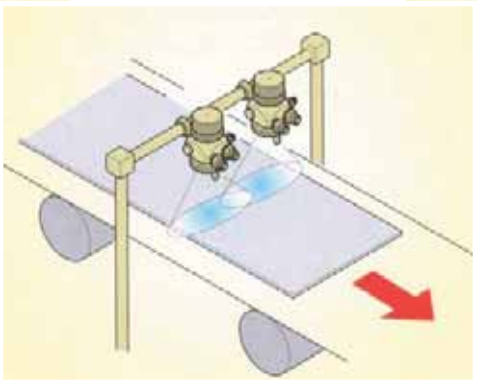
In most of these applications the most important end result is uniform particle size and even distribution. ANEST IWATA has proven technology to suite most all of these situations, doing so with minimal capital expenditure.

ANEST IWATA's SGA-101 compact automatic spray gun is a very affordable automatic air spray gun. Small on size but big on performance, this spray gun is easy to setup and maintain, offering superior atomization without all the adjustments necessary on other spray guns. This means simplified setup and maintenance and repeatable performance. If you need a little more flexibility, ANEST IWATA's full line of TOF spray guns are designed to meet your needs. Taking the SGA-101 concept one step further, the TOF series guns offer a wide range of options and features from the most simple single air inlet design to fully adjustable versions. Round pattern air caps are available on most TOF designs for smaller patterns and shorter spray distances. The TOF's compact design allows for multiple unit installations in tight quarters. All of these benefits come at a surprisingly low cost.

EXAMPLES OF TYPICAL SETUPS







TECHNICAL DISCUSSION with "MITZ"

PROPER AIR PRESSURE IS CRITICAL

In *INNOVATIONS* Issue 6, Fall 2007, I talked about the importance of using clean air to prevent paint defects. In this issue, I want to talk about the importance of your spray gun's air pressure setting. As you know, paint atomization in a spray gun is created by the impact between paint and compressed air at the tip of the spray gun nozzle. Each gun is designed to provide the best spraying ability at certain settings, which are described in the instruction manual or catalogues for each of our spray gun models. Every ANEST IWATA spray gun is designed for use with the setting of each adjustment "fully open."

The main thing you need to be concerned with is the inlet pressure, or atomizing air pressure. Every instruction manual, catalogue or tech sheet has the correct spraying air pressure. It is critical to follow these air pressure recommendation guidelines to get the right finish. You need to check this air pressure at the inlet of spray gun when the trigger is fully pulled with the fluid stroke. Please make sure that the inlet pressure to your gauge is less than 100 psi. This is to protect you and your spray gun, since the maximum pressure of most guns is 100 psi. This safety warning is printed in the instruction manual and stamped on the gun handle opposite the model label.

SPRAYING LATEX

For years, spraying exterior latex with a gravity gun was too slow or too difficult for contractors. Most contract painters have been taught that latex paint can only be sprayed efficiently with an airless system. My experiences as a painting contractor and dealing with automotive paint made me think there had to be a way to get good and efficient results spraying exterior latex with a gravity gun. I looked at my own home and decided it was time to experiment!

I experimented with different brands of latex paint. I tried different combinations of mixing, thinning, spraying, and so on. Almost at wit's end, I came up with a combination that sprayed latex almost as if I was shooting solvent automotive paint. I chose an ANEST IWATA LPH440 gravity gun with a 2.0 nozzle because I know from spraying primer that the spray pattern is sharp or very defined. Spraying at a normal 6 to 8 inches, I sprayed 120 spindles in about 45 minutes. Mixing in a plastic pitcher and refilling my cup as needed eliminated all the cleanup associated with pressure or airless systems.

This might not be for everyone, but after spraying cars, and now 120 spindles in 45 minutes with minimal overspray and no masking, it will be difficult for me to get out those 3" sash brushes again.

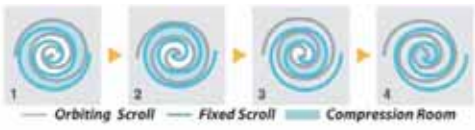
TO MAKE ONE QUART
1 quart latex paint
20 oz. distilled water
3 oz. latex conditioner

TO MAKE ONE GALLON
1 gallon latex paint
77 oz. distilled water
12 oz. latex conditioner

OIL-FREE SCROLL COMPRESSORS

COMING TO NORTH AMERICA IN 2011

As the orbiting scroll orbits from the No.1 position to the No.4 position, air is forced through the scroll components and compressed through the outlet in the center.



ANEST IWATA was the first in the world to develop Air-Cooled Oil-Free Scroll Compressors, which were launched in 1991.

SILENT: LOW NOISE & LOW VIBRATION

Silent operation and low vibration assure a comfortable and quiet workspace.

CLEAN: CLEAN AIR 100% OIL-FREE

Air exhausted from oil-type compressors contain oil, moisture and dust. Oil-free type compressors can supply clean air.

SAFE: SAFE BACKUP FUNCTION

Even if one air end fails, another air end automatically replaces it by jump control. Unmanned operation at night has become easy.

EASY: EASY TO USE CONTROLS

High quality microcomputer is mounted. Maintenance monitor digitally displays operating conditions, warnings and cautions. Automatic power failures and reset functions can be dealt with easily.

SMART: COMPACT AND SMART DESIGN

There are no extruding handles on the back of the machine. Its simple design and reduced installation space required allows it to fit well in any office.

MULTI-STAGE CONTROL

Plural air ends are built into one compressor. Multi-stage control system activates in accordance with air consumption and selects optimum number of air ends required to achieve highest energy saving operation available.

ENVIRONMENTALLY FRIENDLY ENERGY-SAVING CONTROL SYSTEM

When air consumption greatly fluctuates, selection of compressor control system makes a big difference on the energy consumption of your compressor.

DENNIS MATHEWSON BUBBLE FX™

The Artool® Bubble FX™ Freehand® Templates are true organic shapes created from authentic bubbles which you can use to create amazing underwater backgrounds or a myriad of other effects. Artool® Bubble FX™ Templates (C) and (D) are produced using a special polymer-coated material which are solvent resistant. With proper care, and without folding, they will withstand years of repeated use.

"These natural bubble patterns were born from a paint spill in my custom shop in Honolulu, which allowed me to share my secret techniques with other artists everywhere! Submerge yourself in endless creative possibilities!" – Dennis Mathewson

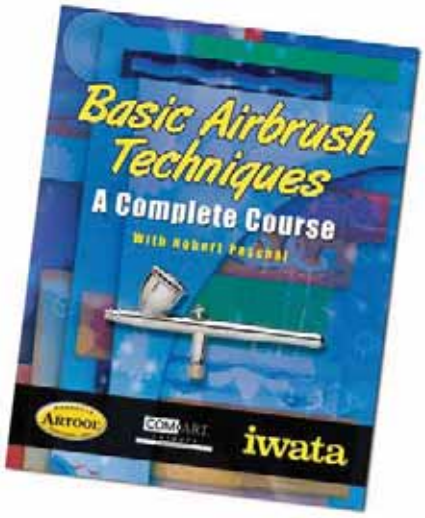
Dennis Mathewson has owned and operated his custom art studio in Hawaii since 1976. Besides all of the custom cars and motorcycles Dennis has painted over the years, his amazing fine artwork graces the walls of Diamond Head Galleries on the island of Maui as well as Oahu. Dennis also travels worldwide teaching and promoting airbrush instruction, and writes feature articles for various publications.

BASIC AIRBRUSH TECHNIQUES

Iwata-Medea Inc. in Portland is pleased to announce the immediate release of the **NEW** book titled Basic Airbrush Techniques, A Complete Course by Robert Paschal. Learn from Robert Paschal the fundamentals of airbrushing in a foolproof, easy and straightforward method.

Robert covers these concepts and more in Basic Airbrush Techniques, A Complete Course:

- Introduction to different types of airbrushes and air sources.
- How to clean your airbrush quickly & easily.
- How to use Frisket film.
- Creating 3 dimensions with shading.



Accompanying Basic Airbrush Techniques, A Complete Course is the **Basic Airbrush Techniques Exercise Kit**. All together in one kit are the necessary materials needed to complete the Exercises in Robert Paschal's book (sold separately). Included in the Exercise Kit:

- Iwata Com-Art airbrush paints, 1 oz. Black & Red
- 1 oz. bottle of Medea Airbrush Cleaner
- 8 sheets of Artool Frisket Film
- Iwata Art Knife for cutting Frisket Film
- 5 Double-Sided pre-printed exercise sheets.

You can find Robert Paschal's Basic Airbrush Techniques: A Complete Course and the Basic Airbrush Techniques Exercise Kit at your favorite Iwata-Medea Inc. distributor. For a complete listing and more information, please visit www.iwata-medea.com.

FOX MARKETING'S LEXUS LS600 HL

SEMA 2010 is right around the corner, and Fox Marketing is finishing up their latest project, a 2010 Lexus LS600 HL hybrid. This car will debut in the Lexus booth during the SEMA show. The car was shot with the new HYBRID LS-400H SUPERNOVA spray gun.

Fox Marketing is best known for the cars they create. Visit their Web site at www.foxmarketing.net to check out their Project Car Development, and see some of the award-winning rides they have designed over the years.

NEW ELECTROSTATIC

Waterborne (E-MW50)

Our FM approved waterborne electrostatic unit is an indirect charge system run by a separate controller and low voltage wire. The gun itself utilizes a cascade cartridge to bring up the working voltage to a maximum of -50KV (E-MW50). The indirect electrode uses a corona charge to induce current on the material. This allows use of this system without any isolation systems or voltage block outs. The use of a separate controller and cascade also minimizes moving parts.

Solvent (E-M15B)

Our Solvent Borne system shares all the benefits of the waterborne unit with the advantage of increased efficiency due to the direct charging needle. This unit works at a maximum of -40KV (E-M15B).

ANEST IWATA

ANEST IWATA USA, Inc.
West Chester, Ohio 45069
(800) 440-0282
www.anestiwata.com

85 Years of INNOVATIONS