

*Dietz Supply Company Presents*

# The Perfect Finish

Issue No. 7

A Closer Look at the  
Industry's Best Finishing  
Products and Strategies



Picture Courtesy of Gema Powder Coating

# A Letter From Our Team

In this issue we bring you information on cost reduction and quality improvement using automation by Gema; Carlisle Fluid Technologies breaks down Ransburg's Ransflex applicators; and GFS walks you through the "Best Practices for Paint Storage."

Additionally, as the summer comes to an end, we look ahead to September and the FABTECH Expo in Chicago featuring many of the top manufacturers in the finishing industry.

We hope you find this material helpful, and as always there is more to explore at the following:

[www.dietzsupply.com](http://www.dietzsupply.com)

[www.facebook.com/teamdietzsupply](http://www.facebook.com/teamdietzsupply)

or search Dietz Supply Company on Instagram

Sincerely,  
Team Dietz



# BEST PRACTICES FOR INDUSTRIAL PAINT STORAGE

Whether it's paint, powder or other surface finishing materials, it is critical to handle chemical substances properly to protect your employees, facility and overall process. Failure to consider safe material storage can lead to quality issues, wasted costs in material and serious health risks. By taking a closer look at quality and safety requirements, businesses can better optimize their entire finishing process for consistent quality and a safer work environment.

## KNOW YOUR MATERIALS

Powders, paints and other chemicals can present safety risks, and often require specific environmental conditions to protect the quality and effectiveness of the material. Some materials are more sensitive to conditions such as temperature, and pose certain threats when stored with other chemicals. Other materials can be stored long-term in bulk inside in a separate storage room and do not require extra safety measures.

Powder coatings, for example, must be stored in a cool, dry environment – with temperatures below 80 degrees and humidity levels less than 50 percent. Since it is hygroscopic, powder easily absorbs liquid. Excessive humidity can cause powder to clump or cake, while dryness can cause problems with

electrostatic application. This type of sensitivity can compromise the quality of the powder itself as well as the end product after powder coating.



In addition to powder, industrial liquid paints can be affected by extreme temperatures, which can have a significant impact on quality and shelf life. Water-based paints may begin to

gel when stored at temperatures below freezing, but when stored at higher temperatures, they can also develop an unfavorable consistency. These extreme environments can cause paint to drastically change its viscosity or lead to settling of residue or pigments that can negatively impact the paint's performance.

## SAFETY CONSIDERATIONS

Surface finishers must be aware of hazards associated with flammable, combustible or explosive materials. This includes everything from atomized liquids or solvents to high concentrations of powders or dust.

Some materials, often found with powders, possess combustible properties. In their atomized state during

the spray application, powder coatings can be fuel for a deflagration (a type of fire or explosion). Solvent-based paints pose health and safety hazards associated with harmful vapors and toxins released into the air. Chemicals such as thinners, cleaners, adhesives, gloss and polishes can also be flammable or combustible, thus the storage of these materials must not be taken lightly.

Organic and metal dusts can be ignited and create a deflagration when dispersed in the air. These materials may not be considered combustible under normal conditions, but the right combination of particle size, concentration and presence of an ignition source can cause deflagration.

To better understand the safety hazards of your coatings and other hazardous materials, start by reviewing the Safety Data Sheet provided by your supplier or directly consult your supplier for questions on chemical properties and associated hazards. The International Building Code (IBC), National Fire Protection Association (NFPA), Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA) and other regulatory agencies can further specify code compliance and storage requirements.

A Safety Data Sheet can answer questions such as:	
whether a chemical is:	or if it requires:
<ul style="list-style-type: none"> <li>• Combustible</li> </ul>	<ul style="list-style-type: none"> <li>• Identification</li> </ul>
<ul style="list-style-type: none"> <li>• Corrosive</li> </ul>	<ul style="list-style-type: none"> <li>• Segregation</li> </ul>
<ul style="list-style-type: none"> <li>• Flammable</li> </ul>	<ul style="list-style-type: none"> <li>• Special handling</li> </ul>
<ul style="list-style-type: none"> <li>• Light sensitive</li> </ul>	<ul style="list-style-type: none"> <li>• Temperature control</li> </ul>
	<ul style="list-style-type: none"> <li>• Ventilation</li> </ul>

Furthermore, the chemical composition of your material may pose certain hazards when stored with incompatible materials, so it's important to understand how your material behaves with others used in the facility.



### PAINT PRODUCTIVITY

Every industrial environment can benefit from good material storage habits. By using your materials more efficiently, businesses can gain significant savings by minimizing waste.

This starts by eliminating the amount of material that is lost by spills or compromised by contamination. Contamination – in the form of atmospheric contamination – can be caused by residuals in the plant air or cross-contamination when working with multiple materials. Contamination not only leads to poor finish quality but can also result in issues with the finishing equipment.

Second, shops can cut costs by storing and reusing leftover materials like primers and basecoats. And lastly, for shops growing quickly, equipment like hazardous material storage buildings help keep up with production demands and reduce the number of times a shop needs to restock. Properly storing materials doesn't only prevent waste but also prolongs shelf life, furthering long-term productivity gains and decreasing shop costs.

### THE COST-SAVING SOLUTION

One of the top reasons that shops are deterred from looking at better hazardous material storage options is cost. This leads many to take shortcuts or find cheaper alternative solutions for hazardous material storage. Even the most experienced businesses may be unaware of potential cost savings, and some may purchase less expensive storage methods without knowing the risks.

One mistake is using a paint mixing room in place of a hazardous material storage building. Solvent-based paints can be stored in paint mixing rooms, but only in small amounts – no more than 2 gallons per square foot. Paint mix rooms contain many of the same features of hazardous storage rooms, such as spill containment and ventilation; however, paint mix rooms are designed to meet compliance for paint mixing – not for storage of large amounts of hazardous materials.

Fortunately, the actual cost of properly storing and handling materials is far less than the cost of code compliance penalties, wasted product and potential safety disasters.



Hazardous Material Storage Buildings from Global Finishing Solutions (GFS) offer a cost-effective solution, designed for safe storage of large amounts of paint, powder or other hazardous materials. In addition to providing a safe, code-compliant environment for paint and chemical storage, Hazardous Material Storage Buildings also double as a safe area for mixing and pumping paint.



Here are the top four ways these buildings cover all of the material storage needs and requirements:

**1. SAFE STORAGE**

GFS Hazardous Material Storage Buildings are designed with explosion proof incandescent lighting and external grounding to prevent static ignition. These buildings not only minimize the risk of deflagration but reduce hazardous exposure for a safer working environment.

**2. CODE COMPLIANT**

Hazardous Material Storage Buildings are designed to meet industry safety standards and comply with applicable International Fire Code and NFPA 30 – Flammable and Combustible Liquids Code for the storage of chemical products. Additional building compliance alterations are available, so the buildings can properly meet required codes and standards. The rooms feature bidirectional fire-rated design and provide deflagration control.

**3. SPILL CONTAINMENT**

The sump system is made of liquid-tight, heavy-gauge sheet steel and supported by exterior-welded steel risers for easy leak inspection. Spills enter the spill containment tray through one-inch-thick, black painted steel grating that runs the entire length of the enclosure and is supported by six-inch steel beams for added stability.

**4. CUSTOM SOLUTIONS**

GFS provides customers with custom engineering and specialized products with options such as dry chemical or water sprinkler systems, custom sizes, heaters and air conditioning units, deflagration panels and ramps that can be integrated seamlessly into the building's design. Shipped completely assembled, the storage buildings are easily installed, portable and designed for either indoor or outdoor applications.



# Reciprocators and Axes

Cost reduction and quality improvement using automation



## Axes solutions for all automation levels

Making the right choice saves time and money!

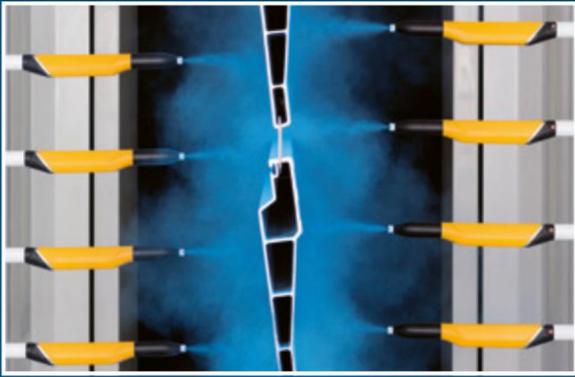
Gema offers a broad range of movement axes for different levels of automation – from basic models up to fully automated axes systems, selected to meet the individual needs and situations.

The following information is courtesy of

Your global partner for high quality powder coating

**Gema**

# The base for all motions



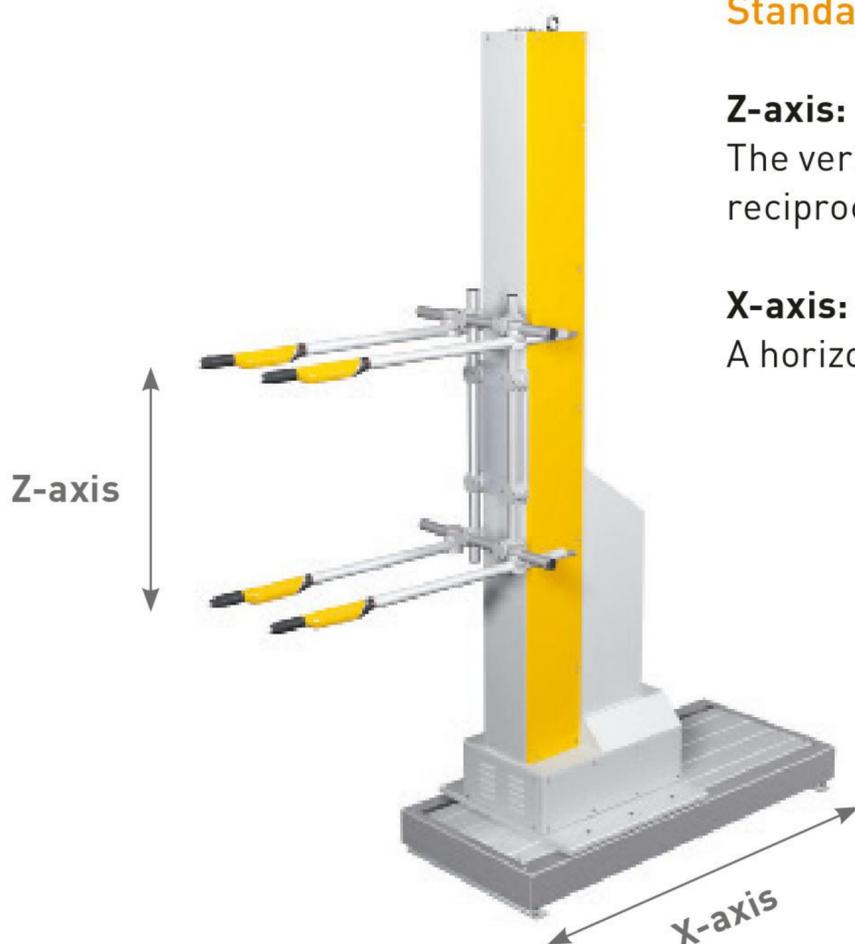
## Reliable and precise vertical reciprocators (Z-axis)

Smooth running, individual programming options and stability combined with high loading capacity are essential for uniform powder coating results. The vertical reciprocators meet these requirements perfectly and feature a solid and maintenance-friendly design. A variety of models, from entry level to heavy loading, build the base for all automation levels, whether simple vertical strokes or complex and multidimensional processes.



## Width adjustment (X-axis)

The coating distance between gun and the object surface is vital for precise coating results. A carriage positions the reciprocator either manually or automatically to the desired position. This axis is also used for automatic cleaning of the gun.



## Standard axes for all applications

### Z-axis:

The vertical axis movement is the base level for all automation, reciprocating the guns to achieve uniform coating results.

### X-axis:

A horizontal axis positions the reciprocator for the width adjustment.

# Multidimensional axes

## Synchronizing with the conveyor (Y-axis)

This option is used for coating hollow bodies, such as oven cavities or control cabinets. The movement of the horizontal Y-axis is synchronized with the conveyor chain speed, guaranteeing accurate coating of edges, recessed parts and internal features. The ideal coating data and movement sequences are programmed in advance and stored in a database, retrievable any time.



## Infeed and Rotating (U-axis and R-axis)

For special object geometries and applications, different types of axes are available. Infeed axes are equipped with an independent drive, accurately moving the guns horizontally in and out during the application of complex components.

Rotating axes are ideally suited to trace inner edges and recessed geometries with angled gun nozzles. U-axis and R-axis can be combined if required.



## Multidimensional axes for complex applications

### Y-axis:

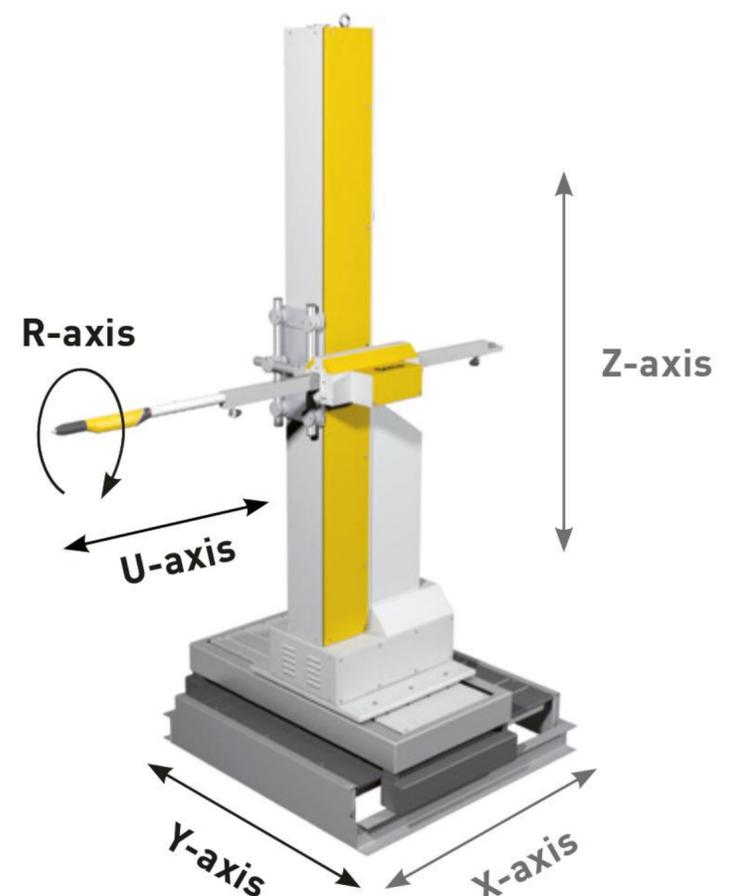
Moves the reciprocator, synchronized with the conveyor along the booth.

### U-axis:

The U-axis positions the gun horizontally into the recessed areas of an object.

### R-axis:

The axis pivots the spray gun around its own axis.



# Adjust your axes with Dynamic Contour Detection

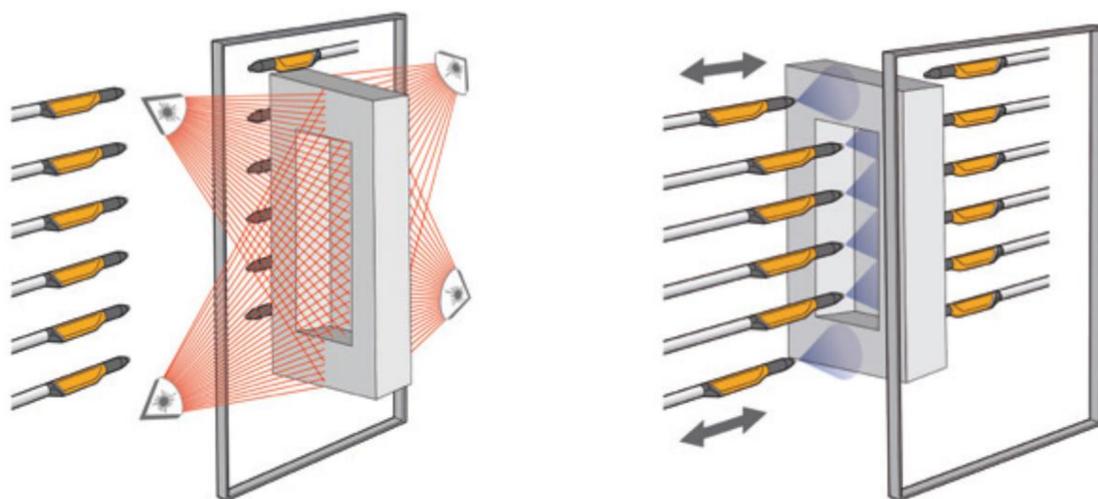
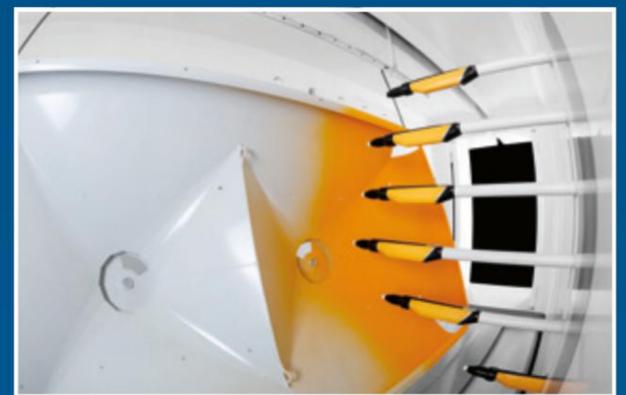
## Dynamic Contour Detection

This sophisticated technology detects the object contour and geometry and automatically adjusts each gun individually to the correct position and starts powder application without the need for programming.

The ability of the laser scanner for fully detection of the external contours of the object in combination with the MagicControl unit and Gema's multidimensional axes provides outstanding coating performances.

## Unlimited application possibilities

The objects are coated individually without the need of individual teaching or programming effort. The usage of dynamic contour detection offers new powder application solutions for any object shapes, even struts or projections are detected and coated with ease.



## Dynamic Contour Detection

The contour detection solution is based on laser scanner technology followed by a dynamic and individual positioning of the gun.

### Benefits Dynamic Contour Detection:

- High levels of automation in the application process
- New coating solutions for complex objects
- Automated recognition of complex geometries for both the front and rear of the object
- Optimized coating quality
- Powder savings and reduction in overspray
- Drastic reduction of the manual coating operation
- Automated programming of U-axes. No time-consuming axes adjustments

# Gap and Height Detection

## Gap detection

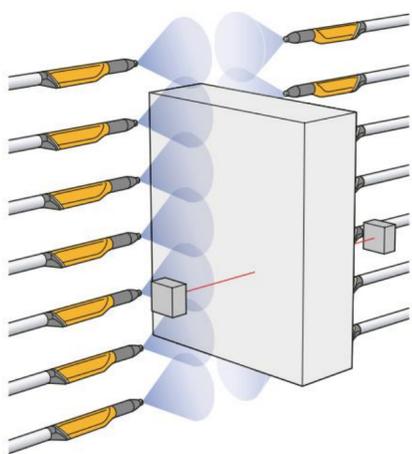
The gap control turns the guns off when components are absent from booth. For this application a sensor detects the object to be coated at the booth entrance and the guns are activated just before the object passes the applicators. In case of a gap, the guns are turned off.

## Height detection

For the height detection a vertical light grid is used, automatically triggering the required guns. If a short object is detected, only the relevant guns are activated. With horizontal gun arrangements, the reciprocator stroke is automatically adapted to the object heights.

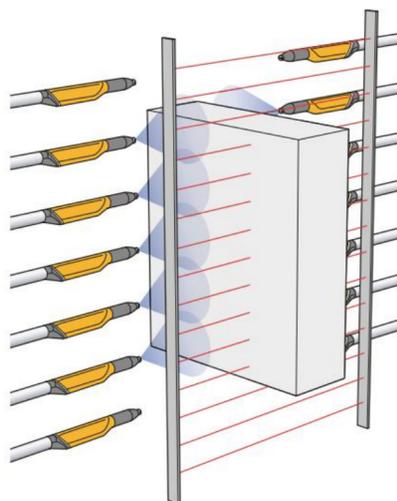
## Width detection

In addition to the gap and height detection systems, the width detection automatically adjusts the reciprocators to the object widths.



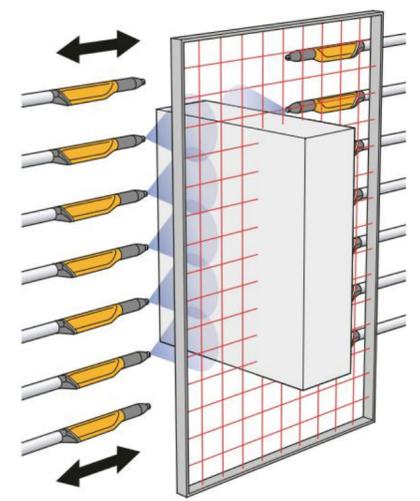
## Gap detection

Gap detection is the base for the «no part – no spray» function.



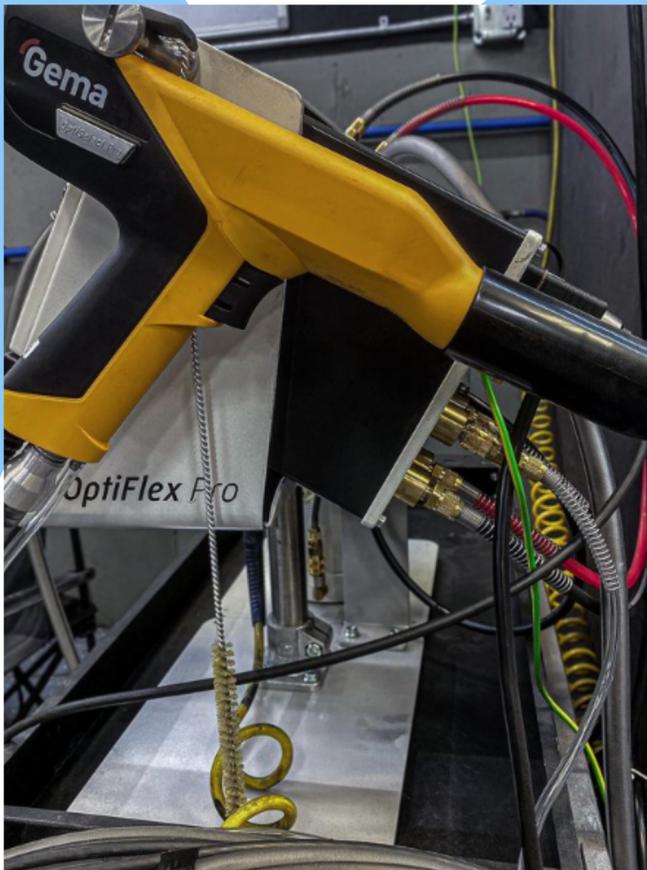
## Height Recognition

Depending on the detected object height only the required guns are triggered.



## Width Recognition

Automatic adjustment of the horizontal gun position according to the object width.



## Gema's OptiFlex Pro

Last month Kreativ Kustoms, a South Florida powder coater, upgraded to an OptiFlex Pro. They pledged only the best for their customers and they knew that the OptiFlex Pro would help them provide that flawless finish. "We looked no further knowing they're the leader in electrostatic finishing on small and grand production scale! This is a statement to our commitment to strive for the utmost professional and quality work leaving our doors no matter how big or small, if it fits in our oven, we are coating it!"

The OptiFlex Pro provides

- ~Robust and durable design
- ~The ergonomic and light-weight gun is well-balanced in the hand
- ~Enables you to coat efficiently and faster
- ~Powerboost -Safe technology for more power performance
- ~The integrated cleaning of the power conveying components can be enhanced by the optional PowerClean module
- ~The latest generation of nozzles ensures an excellent powder distribution and penetration



**Ransburg**<sup>®</sup>  
A **CARLISLE** BRAND



RansFlex<sup>®</sup>  
High Performance Electrostatic Finishing

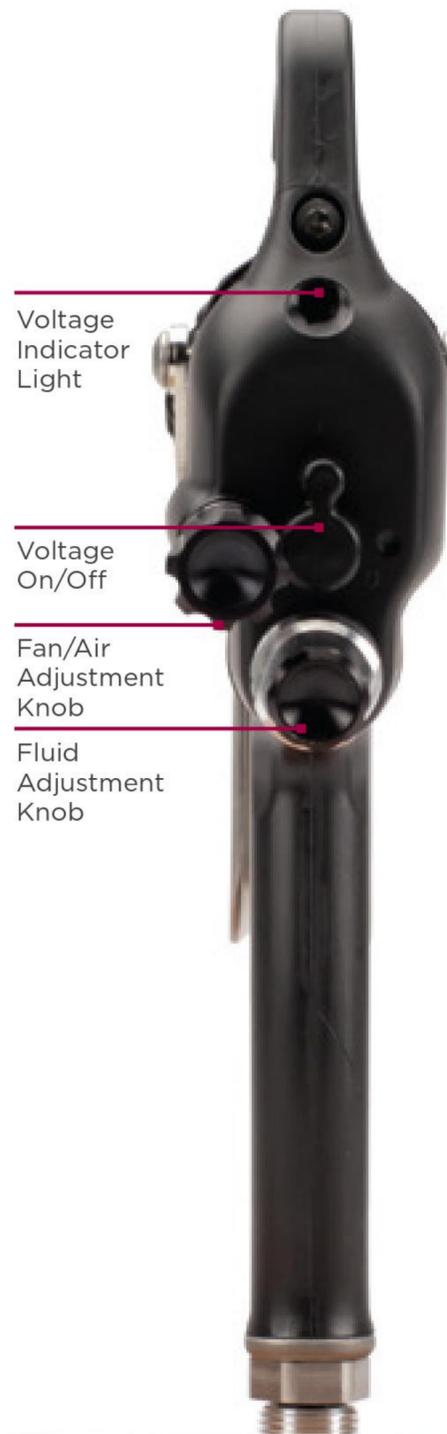
# RansFlex Ergonomics

## Flexibility that feels better in your hand

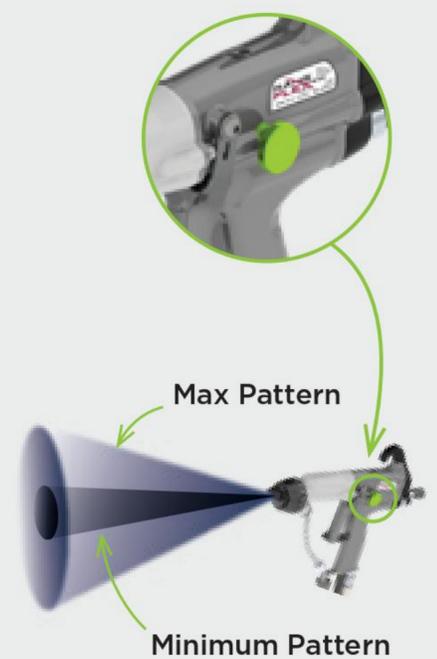
RansFlex guns provide painters with a more streamlined, lightweight and ergonomic experience. Less stress on joints and muscles lowers the risks of carpal tunnel and the impact of physical strain.

- Extended and rounded rear section - supports the weight of the applicator across the top of the hand
- Air inlet fitting positioned close to bracket, reducing the “treeing” effect of connectors while increasing maneuverability which decreases fatigue for the painters
- No special fittings required
- Contoured area on handle for added stability
- Stylized design rests comfortably in a painter’s hand

Lighter.  
Balanced.  
Streamlined.



Quick Fan model features an adjustable spray pattern with a click of the button for increased productivity.



	RansFlex RX Solvent	RansFlex RFX Solvent	RansFlex RXi Indirect Water	RansFlex RFXW Direct Water	RansFlex RFXQ Quick Fan Adjust Solvent	RansFlex RXQ Quick Fan Adjust Solvent
<b>Material</b>	Solvent Base	Solvent Base	Water Base	Water Base	Solvent Base	Solvent Base
<b>Model #</b>	81345-XXXXXX•	81365-XXXXXX•	81465-XXXXXX•	81520-XXXXXX•	81565-XXXXXX•	81545-XXXXXX•
<b>Weight w/o Hoses</b>	600g (21.3 oz.)	620g (22.0 oz.)	600g (21.3 oz.)	620g (22.0 oz.)	620g (21.3 oz.)	600g (21.3 oz.)
<b>Height</b>	190.5 mm (7.5" )	190.5 mm (7.5" )	190.5 mm (7.5" )	190.5 mm (7.5" )	190.5 mm (7.5" )	190.5 mm (7.5" )
<b>Width Max</b>	41.2 mm (1 5/8")	41.2 mm (1 5/8")	41.2 mm (1 5/8")	41.2 mm (1 5/8")	41.2 mm (1 5/8")	41.2 mm (1 5/8")
<b>Length</b>	254 mm (10")	273 mm (10 3/4")	254 mm (10")	273 mm (10 3/4")	273 mm (10")	254 mm (10")
<b>Operating Voltage</b>	45 kV	65 kV	65 kV	65 kV	65 kV	45 kV
<b>Max Current</b>	140 microamperes	120 microamperes	140 microamperes	120 microamperes	120 microamperes	140 microamperes

\*Contact distributor for specific part numbers.

# Powered Air-Purifying Respirators



## EVA Series Powered Air-Purifying Respirator

**Healthcare, Pharmaceutical, Painting, Grinding, Welding, and Powder Coat Applications**

EVA offers cutting-edge Powered Air-Purifying Respirator (PAPR) technology and design. Offering workers a 1,000 Assigned Protection Factor (APF) in a small, low-profile design for added customer comfort, EVA was engineered with direct input from end users and experts from the field. Equipped with an innovative Active Flow Technology System that automatically maintains constant air flow, EVA is always responding to a worker's need for more or less air. This intelligent system is continuously working to maintain constant air flow, regardless of filter type, hood type, filter loading, or battery capacity. EVA features an easy-to-read fuel gauge that lets the user quickly check the unit's battery status, plus a long-lasting 10,000-hour brushless motor designed for long-term reliability.





NORTH AMERICA'S LARGEST  
METAL FORMING, FABRICATING,  
WELDING AND FINISHING EVENT



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**SEPTEMBER 13-16**  
McCormick Place / Chicago, IL

**2021**

**#FABTECH2021**



## ABOUT THE EXPO

### North America's Largest Metal Forming, Fabricating, Welding and Finishing Event

FABTECH returns to McCormick Place September 13-16, 2021 and provides a convenient 'one-stop shop' venue where you can meet with world-class suppliers, see the latest industry products and developments, find the tools to improve productivity, and increase profits. We strongly believe in the power of in-person events to discover, educate, and motivate the metal fabrication industry.

## EXPO HOURS

Monday Sept. 13	10 AM — 6 PM*
Tuesday Sept. 14	9 AM — 5 PM
Wednesday Sept. 15	9 AM — 5 PM
Thursday Sept. 16	9 AM — 3 PM

\*East Building (Lakeside Center) opens at 9 AM

## VENUE

McCormick Place, 2301 S. King Dr., Chicago, Illinois 60616

[fabtechexpo.com](http://fabtechexpo.com)