

# ITW Gema presents OptiFlex

## Reliability and flexibility for the powder coating into the 21<sup>st</sup> century!



At the end of 2005, ITW Gema AG launched the new OptiFlex equipment line for manual powder coating applications. Already, this innovative and uncompromising development has caused quite a sensation in the powder coating world. Particularly in the field of coating performance, the OptiFlex line meets the high requirements and technical performance for powder coating in the 21<sup>st</sup> century. Comprehensive in house testing, coupled with customer feedback gives evidence that painting is completed between 10 and 40% quicker with the new units. Couple this with a higher transfer efficiency and you are guaranteed a shorter ROI (return on investment)!

Patrik Studerus, product manager for manual equipment at ITW Gema AG, said: "The new manual equipment line was developed in close collaboration with customers in a variety of countries. Working in partnership with coaters of many years experience, we were able to integrate many of their ideas and requests at an early stage, resulting in the most progressive powder coating unit in the market. This helped also to achieve an excellent reliability." In addition, the new generation equipment catches your eye with its modern design, for which it recently won the coveted IF Award. Amazingly, this award comes exactly 30 years after ITW Gema won the same award for its legendary 721 generation of equipment.

### "The new lightness "

The new OptiSelect manual gun was designed with a special focus on ergonomics. The result not only looks chic, but also guarantees fatigue-free powder coating due to perfect balance and ingenious ergonomics. The award winning gun weighs only 520 grams, yet in manages to include:  
 A quick-change connector for the grounded powder hose  
 An electrode with automated rinsing air  
 Integrated 100 kV high-voltage cascade  
 And a remote control!

Marco Sanwald, head of the OptiSelect development team, said:

"Considering the equipment, this is a record in the field of manual guns for industrial powder coating. All components have been optimized by using the latest development methods. As a result, the OptiSelect is the most modern gun in the market."



The key factors are not only the outer appearance and technical specifications of the new equipment, but also the coating result.

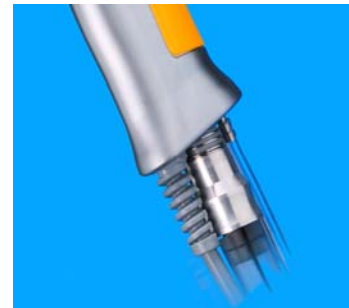
Here, the manual gun OptiSelect achieves the highest transfer efficiency and uniform coating results, which are guaranteed by the integrated 100kV high-voltage cascade.

Producing a gun with powder proof seals was an important part of the development process. “Other guns in the marketplace show difficulties in functioning because of powder infiltration” said Marco Sanwald. “The OptiSelect is provided with a sealed gun body and therefore fulfills the requirements of protection class IP64. This even allows the use of all known metallic powders without any additional modifications to the standard gun.”

### Useful equipment details

The quick-change connector and remote control contribute to comfortable and quick coating applications.

With only one hand, the grounded powder hose is released from the gun. The quick-change connector features an ingenious system guaranteeing both a secure fitting and fast operation. In addition, the connection is designed so that the conductive powder hose is automatically grounded.



The integrated remote control on the back of the gun is extremely useful. With the “+” and “-” keys, the following functions are operated by remote control:



Regulation of the powder delivery



Program selection on the control unit OptiStar

To achieve optimum coating results for the entire spectrum of parts, a wide range of flat and round spray nozzles are available. The patented electrode rinsing air prevents “splutters” and coating errors.

Of course, with OptiSelect, you don’t have to do without the popular SuperCorona®. This is used where the customer requires a thicker film build and a high quality finish at the same.

The manual gun is tested according to current standards (PTB, FM, ATEX) and offers all the protection that the customer or official safety organizations may require.

## Full control of all parameters

The gun control, OptiStar, was also developed by taking into consideration comprehensive customer feedback. Felix Mauchle, Head of Development at ITW Gema AG said: “A control unit has to be easy to use, all relevant parameters must be seen at a glance. These elements were key in the development of the control module, OptiStar.”



The heart of the module is the patented DVC technology (Digital Valve Control). All of the air required for powder conveying and coating is controlled via the microprocessor. Regardless of the powder quantity selected by the customer, the total air volume is kept constant. The Key advantage for the coating process is that the OptiStar control unit delivers either a soft, or strong powder cloud, with a smooth effect, therefore eliminating surging and giving a consistently powder lay down.

Apart from high voltage, the spraying current on ITW Gema’s new control units can also be adjusted. For a detailed explanation we turned to Felix Mauchle: “We can compare the whole thing to a car, where the power to move is generated by the motor and the speed is controlled via the accelerator pedal.”

The voltage intensity (kV) generates the power to charge the powder. The coating process itself is monitored via the integrated spraying current control, which, in a certain sense, works as an accelerator pedal and keeps the charging process constant.

As standard, the OptiStar control unit comes with three pre-configured coating programs. These are ideally suited for coating flat parts, profiled work pieces or for recoating already treated parts and can be selected in a simple and easy way via the display pilot.






The foil keyboard ensures easy and precise control over high-voltage, spraying current, power delivery, total air and fluidizing air.

“Many customers have specific programs for frequently recurring parts” said Felix Mauchle. “OptiStar comes to meet these applications, as up to 20 custom coating programs can be stored in the OptiStar control unit. These can be recalled at any time and guarantee reproducible coating results and therefore a constantly high coating quality.”



OptiStar offers a myriad of functions in a compact housing:

-  Simple setting via a foil keyboard and clear display of the values, which are easily readable, even in daylight.
-  Storage and recall of all the process parameters
-  Control of air quantities and control of vibrator (OptiFlex B) as well as the stirrer unit via the manual gun OptiSelect

A further very useful function is the integrated cleaning program, which allows additional time saving during color change.

### A large range of appliances for all applications

“An unit that meets all requirements of all the customers and industries worldwide is extremely difficult to realize” said Markus Lenherr, Sales Director at ITW Gema AG. “But with the new OptiFlex manual equipment line, we cover the whole range. Whether you opt for OptiFlex B designed for direct use with the powder manufacturer’s original boxes, OptiFlex S for difficult-to-fluidize powders or OptiFlex L for lab applications, we are able to meet every requirement.”



OptiFlex C

OptiFlex F

OptiFlex B

OptiFlex S














OptiFlex L

For powder manufacturers or general applications of the smallest quantities, the new application cup with auto-fluidization completes the assortment. It allows quick color changes within 30 seconds. Its biggest advantage: the cup is directly connected to the OptiSelect manual gun and acts autonomously as an injector. The bottom of the cup is a fluidizing plate and this guarantees that the coating tests correspond exactly to the settings.



## A success story right from the beginning

The new line is a big hit in the marketplace. The following statements of first-timer users prove it:

-  “The adjustment possibilities allow you to see and understand what is hidden behind the programs.”
-  “The rinsing program is the best.”
-  “The preprogrammed settings are very good, most applications can be processed with them.”
-  “All in all far quicker coating.”
-  “The recoating works extremely well.”
-  “Considerably better surface quality.”
-  “Even better metallic results.”
-  “Brilliant design.”
-  “Super lightweight gun, facilitates the work for the coater.”
-  “Noticeably better transfer efficiency.”
-  “Many adjustment possibilities.”
-  “Our quality control commented positively on the improved coating quality.”
-  “We recommended the new OptiFlex appliance to other coaters.”

Felix Mauchle: “We completely aligned the development of the appliance to the customers’ requirements resulting in an extremely user-friendly product, which has enjoyed worldwide popularity within a short period of time“.

“And we also paid attention to the design,” adds Patrik Studerus “as this contributes to a simple and intuitive use of the appliance. And winning an IF design award with OptiFlex, 30 years after our last prize, makes us all the more delighted!“



## OptiFlex: reliability and flexibility for 21<sup>st</sup> century powder coating technology!



[www.optiflex.biz](http://www.optiflex.biz)

[www.itwgema.ch](http://www.itwgema.ch)