

ITW Gema OptiFlex A2 Powder Coating Installation



Stock No	JR007
Manufacturer	ITW Gema
Model	ITW Gema OptiFlex A2 System
Year of Manufacture	2011
Work Envelope (WxDxH mm)	450 x 1700mm
Process Stages	Multiple
Other Info	Modern Plant In As NEW Condition
Location	Birmingham
External Dimensions (WxDxH mm)	See Individual Listings

Description

On offer here, is an exceptional quality powder coating plant available direct from a national premier automotive component manufacturer

Having been originally installed new in 2011 and only run on a 6 month trial period, this plant is now available for reinstallation at a fraction of the cost of a NEW plant purchase.

The plant items on offer form all of the major components required to install a modern, high quality intelligent, automatic powder coating plant within your own production facility. With this base units being offered in component form, the layout can be readily adapted to suit both your production requirements and the available workshop space. This would only then

require an appropriate overhead conveyor track to complete the set-up, suiting both the new layout and the components to be coated.

The four major components of this system include;

HydraPower Dynamics stainless steel three stage wash & pre-treatments plant

ITW Gema OptiFlex A2 powder coating booth with dual reciprocators, manual touch-up station and full powder recovery, reclamation and powder feed system.

Vulcan Infrared Catalytic gas fired tunnel curing oven.

HydraPower Dynamics Forced cooling station.

This system was originally designed and commissioned to cater for steel drive train components running at a track speed of 1.5mtrs/min and with a working envelope of 450mm wide by 1700mm drop.

Major components overview

HydraPower Dynamics stainless steel three stage wash & pre-treatments plant.

An all stainless steel 3 station pre-treatments plant, which can be configured with the appropriate chemistry to either wash, rinse, and passivate, or wash and phosphate, rinse and rinse seal to a wide range of substrate materials, prior to the application of an organic coating.

The unit consists of a modular constructed 304 Stainless steel wash tunnel with all of the associated ancillary equipment such as pumps, heaters, level control, steam extraction and spray head risers.

ITW Gema OptiFlex A2 powder coating booth

The ITW Gema plastic constructed spray booth has a working aperture of 450 x 1700mm and is equipped with a manual touch up window, 6 x automatic guns, 2 x robotic manipulators, powder recovery and feed system and fire protection.

The ITW Gema system is one of the best systems available in the world today. It offers High transfer efficiency, reproducible results and the simple control of all gun parameters at a single glance!

The OptiFlex automatic system leaves nothing to chance and guarantees high-quality powder coating!

The integrated 100 kV cascade delivers the highest transfer efficiency. This means more powder on the work piece, less powder in the reclaim system.

The clear display makes it easy to find the optimal settings in every condition. 3 pre-set programs give you the best performance on flat parts, profiles and re-coating. Advanced users can create other programs customised to their own needs.

The OptiStar control module is the key to obtain accurate and reproducible coating results.

- Patented Digital Valve Control (DVC) technology for accurate powder output control
- Clear visual display for direct access to all coating parameters: high-voltage, current limitation, powder output, air volume

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- 3 standard programs (flat parts, profiles and re-coating) and 250 customised programs available anytime via the Display Pilot
 - Powder output alignment for all automatic guns
 - PLC communication via the optional CAN-Bus or DigiBus
 - Closed loop airflow control via the optional Flow Control
- The OptiFlex A2 automatic spray system also includes-
- OptiMove control units for the reciprocators
 - OptiAir control units, for hose rinsing and hopper fluidisation
 - Interlocking and data exchange with higher-level plant control unit
 - PLC communication via the optional CAN-Bus or DigiBus

The intelligent control system on this plant allows product identification by simple means of either a proximity switch or bar code reader to identify whether there is a component on the carrier or even what type of component is located on the carrier to adjust the spraying actions accordingly.

If no part is present the system will let the carrier pass through the booth without spraying and with the identification system in place, adjust both the movement of the robotic reciprocator and spray patterns of the guns to optimise the coverage and save on any wasted powder.

The recovery and reclamation system consists of a reverse pulse dust extractor that recovers the powder from the booth, sieves and grades the powder and re-introduces the re-useable reclaimed powder back to the feed hopper in a closed loop system. The powder in the feed hopper is monitored for its working level and virgin powder is automatically introduced to maintain the system in an optimum state.

The booth is also protected with fire eyes and a CO2 fire suppression system that is incorporated to protect the equipment in the unlikely event of a fire.

Vulcan Infrared Catalytic gas fired tunnel curing oven

The Vulcan Catalytic gas fired tunnel oven is a 7 zone modular curing tunnel that uses the latest technology to produce an infra-red heat source without generating a flame, making the oven suitable for a wide range of applications including powder and wet paint curing.

The Vulcan catalyst control system incorporates a full pulse module allowing variable and accurate temperature control throughout the full length of the oven and full zonal control to pre and post heat the components.

The modular design of the oven also means that the length and thus exposure times can easily be adapted by simply either adding or subtracting modules to the system.

HydraPower Dynamics Forced cooling station.

The HydraPower Dynamics Forced cooling station is designed to cool stoved parts at a controlled rate, making the de-jigging and removal of components after a heat curing process as simple and safe for the operator as can be. The controlled cooling offers the ability to remove the products in the shortest possible time, saving on the need for long outruns and ultimately floor space.

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Manual by-pass air mix dampers have been installed and when used, these dampers allow (warm) shop air to mix with atmosphere air, to balance the system.

The supply air is then filtered to remove contaminants and forced onto the transient parts via ductwork with return vents, designed to give both directional flow and the appropriate velocity for optimal cooling.

Having passed over the parts, the air is then exhausted directly to atmosphere via high level fans.

Full technical details of each of the machines can be viewed under our stock numbers:

Three stage wash & pre-treatment plant, JR0007A,

ITW Gema OptiFlex powder spray plant, JR007B,

Vulcan Infrared Catalytic oven, JR007C,

Forced cooling station, JR007D.

Photographs taken prior refurbishment. Our refurbishment service is not available on all machines.