

## Case Study: Manaplas, Venezuela.

<http://www.manaplas.com/>

### Application: Plastic Injection

Manaplas S.A was founded in 1960 and currently specializes in the manufacturing of plastics products primarily for home use. During the production process, Manaplas utilizes cutting edge resin injection machines that feature compression strength between 50 to 2500 metric tons.

In 2005, the company began to modernize the electric system of their plant. At that time, the decision was made to replace the electromechanical capacitors, due to the operational problems, inefficiency, and high maintenance cost of the existing equipment. As a result, a thorough study was conducted in order to design new capacitors which addressed these issues as well as the current demands of the plant machinery.



After evaluating various options, Manaplas S.A chose Elspec in January 2006, through their local agent in Venezuela **Faprolec S.A**, to supply the necessary capacitor systems that were to be installed. Their decision was primarily based on a few critical criteria. First Elspec offered an exclusive capacitive technology far superior to the traditional electromechanical type. In addition Elspec is a global leader in supplying this type of equipment in a variety of applications.

Manaplas S.A purchased a total of four (4) capacitor banks (with a total of 2457kVAr) from Elspec. From the onset of the installation, the following important benefits were immediately noted:

- An electrical consumption decrease of 10-12%
- Better and much more efficient motor operation in general
- Substantial decrease of equipment maintenance in the plant.
- An overall stabilization of the site Voltage

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Activar 665kvar, 240V detuned 14%



2 x Activar 705kvar, 240V detuned 14%



manaplas s.a.

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## A QUIEN PUEDA INTERESAR

**MANAPLAS S. A.** es una empresa fundada en 1.960 que se dedica a la manufactura de productos plásticos, primordialmente para uso en el hogar. En su proceso productivo emplea máquinas de inyección de resinas de última tecnología, que van desde las 50 hasta las 2.500 toneladas métricas de fuerza de cierre.

En el año 2.005 la empresa acometió el proyecto de modernización del sistema eléctrico de su planta, entre cuyos puntos se contempló el reemplazo de los Bancos de Condensadores existentes, que eran del tipo tradicional "electromecánico". Estos equipos presentaban problemas de operatividad, poca eficiencia y elevados costos de mantenimiento. A tal efecto se hicieron los estudios correspondientes para diseñar los nuevos Bancos de Condensadores acordes con las nuevas necesidades nuestras instalaciones.

Luego de evaluar varias opciones, se eligió a la empresa **ELSPEC**, representada en Venezuela por **FAPROLEC S. A.** para proveer los Bancos de Condensadores que entraron en servicio en Enero del 2.006. Esta selección se basó fundamentalmente en la exclusiva tecnología de avanzada que utiliza este fabricante, que supera ampliamente a la tradicional del tipo electromecánico. Adicionalmente, **ELSPEC** posee una demostrada y amplísima experiencia a nivel mundial en el suministro de estos equipos en las más variadas aplicaciones.

Se adquirieron e instalaron cuatro (4) Bancos de Condensadores (para un total de 2.457 KVAR) y desde el mismo momento de su puesta en servicio, pudimos notar importantes beneficios entre los que destacan los siguientes:

- Economía en consumo eléctrico de 10-12 %.
- Mejor y más eficiente operatividad de motores y equipamiento en general.
- Disminución sustancial en mantenimiento de los equipos de planta.
- Estabilización del voltaje de servicio.

Durante la instalación y puesta en servicio de los Bancos de Condensadores, la empresa **FAPROLEC S. A.**, fue de gran ayuda por la calidad y profesionalismo de su personal, lo que permitió llevar a feliz término este proyecto.

Por lo antes expuesto no dudamos en recomendar ampliamente a **ELSPEC / FAPROLEC S. A.** para el suministro e instalación de Bancos de Condensadores para corregir el factor de potencia, con los consecuentes beneficios que estos equipos conllevan.



Ing. Salvador Alcalde V.  
GERENTE DE OPERACIONES

POR MANAPLAS S. A.

En Caracas, el 15 de Junio de 2.007

## **TRANSLATION**

Caracas, June 15<sup>th</sup>, 2007

To whom it may concern,

Manaplas S.A was founded in 1960 and specializes in the manufacturing of plastic products, mainly for home use. During the production process Manaplas uses injection machines of resin with the latest technology which goes from 50 to 2500 metric tons of compression strength.

In 2005 the company started to modernize the electric system of their plant, and it was decided to replace the existing capacitors which used to be traditional "electromechanical". This equipment faced operational problems, inefficiency and high costs of maintenance. As a result, a thorough study was conducted in order to design the new capacitors with the new necessities in our plant.

After evaluating various options, the company Elspec with a local representation in Venezuela by Faprolec S.A was selected as a supplier of the capacitor systems that were installed in January 2006. This election was fundamentally based on the exclusive technology used by Elspec which is much superior to the electromechanical traditional type. In addition Elspec has vast experience worldwide supplying this equipment in various applications.

Manaplas S.A purchased a total of four (4) capacitor banks (with a total of 2457kVAr) and since the beginning of installation important benefits were noted in which we can mention the following:

- Electrical saving of 10-12%
- Better and much more efficient motor operation in general
- Substantial decrease of equipment maintenance of the systems in the plant.
- Voltage stabilization.

During installation and operation of the capacitor banks, the company Faprolec S.A was very professional and helpful which enabled us to successfully end the project.

For all above mentioned we have no doubt recommending extensively Elspec/Faprolec S.A for the supply and installation of these systems in order to correct power factor and as a consequence the benefits involved.

Eng. Salvador Alcalde V.

Operacional Manager