

# POWER PROFILE

Customer: JMP Flowers

## Location:

Stężyca, Poland

## Customer Business Issue:

To expand with a new greenhouse for orchid cultivation using a high-efficiency cogeneration unit

## Solution:

Cat® CG260-16 genset

## Cat® Dealer:

Eneria Cat



JMP is Europe's largest orchid producer.

## POWER NEED

Headquartered in Stężyca, Poland, JMP Flowers is a family-owned and operated business with over 40 years of experience in growing and selling flowers. JMP uses state-of-the-art technologies to grow and ultimately export their flowers throughout Europe, Russia, and Australia.

JMP grows over 135 different varieties of roses and anthuriums (sometimes known as laceleaf flower) and over 2,000 varieties of orchids, grown in a greenhouse extending over 18 acres! Recently, the company increased its crop area to become Europe's largest producer of orchids. Energy costs account for roughly forty percent of all costs of the typical greenhouse operation, so efforts to reduce energy consumption are always top of mind. With their recent expansion, the family wanted to make their newest greenhouse the most technologically advanced greenhouse in Europe.

## SOLUTION

The orchid expansion led JMP to invest in a new high-efficiency cogeneration unit, which guarantees continuous lighting and air temperature regulation in the greenhouse. "After a thoughtful process, we ultimately decided to partner with Eneria Cat to purchase our power solution," said Jarosław Ptaszek, CEO of JMP Flowers. "We've been happy with the Cat® generators we've used in the past and felt the most rewarding option for our growing business was to invest in a Cat CG260-16 generator set in our new greenhouse. We've worked closely with Eneria Cat to determine the best configuration to work with our existing installations," said Ptaszek.

The Cat CG260-16 produces 4.5 megawatts of electric power and a thermal output of 5.25 megawatts, with a total efficiency over 90%. Thanks to the simultaneous generation of electricity and heat from gas fuel JMP Flowers could reduce the energy cost compared to a classic supply (utility and boiler) and reach a payback time of 3 to 4 years.

## RESULTS

Thanks to the Cat power solution being equipped with a Selective Catalytic Reduction (SCR) gas treatment system, the carbon dioxide of the exhaust gases is circulated throughout the greenhouses which stimulates growth of the flowers. Through the process of photosynthesis, plants turn carbon dioxide into oxygen, which in turn is released into the atmosphere.

The cogeneration solution not only minimizes greenhouse gas emissions, but also produces oxygen, which has a positive impact on the environment and contributes to the circular economy.

"Thanks to Caterpillar power solutions, we have met our demanding goals for energy costs, which has contributed to the dynamic growth of our company," states Ptaszek. When completed in 2018, the JMP Flowers newest greenhouse was one of the most innovative facilities for orchid cultivation in the world. The entrepreneurial traditions of the Ptaszek family has continued for six generations—making them one of the longest running family businesses in Poland.

For more information, please visit [cat.com/powergeneration](http://cat.com/powergeneration)