

Case story | VACON® 100 X

VACON® 100 X to control RUBBLE MASTER's compact crushers

Compact, mobile recycling systems have become a growing trend. RM compact crushers are very handy: thanks to their compact size, low noise level and dust emissions they can be used anywhere. RUBBLE MASTER has selected the VACON® 100 X AC drive to control their new mobile crusher "RM V550GO!" For RUBBLE MASTER, the VACON® 100 X provides something no other AC drives supplier was able to offer.

RUBBLE MASTER HMH GmbH, located in Linz, Austria, develops and manufactures mobile compact crushers and mobile screens, which are used globally. RM crushers are

cost-effective, simple to transport and operate and can be used anywhere thanks to their compact size, low noise level and dust emissions. RM crushers enable construction companies and disposal operations to process small to medium quantities of waste building materials themselves, wherever and whenever they want, cost effectively.

Until recently, RUBBLE MASTER has used a custom-made drive up to 11 kW to control the motors of the vibrating conveyor of their crushers. However, for their new crusher design they needed a 15 kW drive, which could withstand demanding environments. Gerald Hanisch, CEO from RM explains:

"As our mobile crushers are used all around the world, we needed a robust drive which endures a wide range of operating temperatures and is able to withstand dust, moisture, humidity and vibrations. Additionally, the drive must tolerate high altitudes."

"Fortunately, we recognized RUBBLE MASTER's needs and offered them our VACON® 100 X drive," says Johann Goldfuss, Managing Director of Vacon Austria. "VACON® 100 X matches exactly with RM's requirements and provides a solution which no other supplier can deliver. It also proves how the VACON® 100 X products perform in demanding environments," Mr Goldfuss continues.





RUBBLE MASTER uses VACON® 100 X drives in their new mobile crusher RM V550GO! to control two unbalanced motors in parallel which run a vibrating conveyor. For RM, the VACON® 100 X provides a customized solution in a standard device, fulfilling all RM's requirements.

Photos courtesy of RUBBLE MASTER.

As the company name implies, RUBBLE MASTER is a master of crushing rubble – broken stones of irregular size, shape and texture – but they also process natural rock efficiently. RUBBLE MASTER is a new OEM customer to Vacon. Their compact crushers and screens are the most cost-effective solution for mobile processing.

Controlling unbalanced motors in parallel

RM uses VACON® 100 X drives in their new RM V550GO! to control two unbalanced motors in parallel. These motors run a vibrating conveyor, which transports the material to be crushed (for example, demolition material) to the crushing section. CAN bus is used for communication with their internal control system.

The VACON® 100 X fits perfectly and provides all the features RUBBLE MASTER needs within one standard drive. Due to the IP66 rating, RM was also able to remove the extra enclosure which was required by the previous solution.

The VACON® 100 X drive for internal testing with the new type of mobile

"We received all the service and support we needed during our testing and piloting phase, and we are very happy and satisfied with the Vacon solution,"
Gerald Hanisch, CEO from RM

crusher was delivered to RM in the spring of 2012. The testing phase has been completed successfully and they have moved on to serial production.

More to come

Now RUBBLE MASTER is also considering replacing the customized solution used in their existing products with VACON® AC drives. Additionally, they're also planning to start using VACON® AC drives to control other parts of their machines.

VACON® 100 X – A decentralized drive

The VACON® 100 X represents Vacon's concept of decentralized drives: products that can be mounted directly on the motor or machine or wherever the most convenient location for the drive is. Significant savings can be achieved in cabling costs, space and energy when the installation does not require the drives to be mounted in a separate electrical room or enclosure.

The VACON® 100 X has a power range up to 37 kW – unmatched

by competitors – and has highly advanced control capability which guarantees processes run exactly how you want them to.

A die-cast metal enclosure provides the best protection available, and a breathable Gore vent protects the sealings and a heatsink cooling system which isn't dependent on motor airflow. On top of all this, it has built-in harmonic filtering chokes, making it easy to see why this is the ideal motor-mountable solution for all sorts of applications.

This case story was originally released before the merger of Vacon and Danfoss Power Electronics was fully completed on 15 May 2015. As a result, Vacon as a company brand no longer exists and contact persons mentioned in the story may have changed. Future case stories on VACON® products will be released on behalf of the new organization – Danfoss Drives – which is part of the Danfoss Group.