

A special model of the New Holland Construction B100C backhoe loader for cutting marble, produced with Benetti Macchine Spa. Quick, efficient, ingenious.

A new star is making its debut in the marble quarry sector: a New Holland Construction B100C backhoe loader has been equipped with a support arm and chain cutter, mounted in place of the traditional backhoe, that offers a new ingenious, and simple method for cutting blocks of marble, which is both fast and efficient.

The B100C was fitted with a chain cutter (CST 965) developed by Benetti Macchine SpA, who are based in Carrara and specialise in supplying marble-cutting machines. They worked in close collaboration with the New Holland Construction Engineering division in Lecce, which has the capability to produce bespoke machines, based on requests from its customers, for niche sectors.

Federico Benetti, owner of Bennetti Maccine SpA explains the background to the development of this new product "This machine was created to meet the needs of our customers, who know better than anyone how to improve their business and what machines are required to best achieve it. What they were missing until now, was a machine that could operate autonomously in the quarry, and cut blocks of marble insitu. To accomadate this requirement we explored the idea of combining cutting equipment with a backhoe loader."

Benetti considered New Holland to be the ideal partner to develop this type of innovative product with, due to the performance and known reliability of their backhoe loaders. The close collaboration between the manufacturer's engineering division and the Benetti technicians, resulted in the development of a backhoe loader specifically designed for this particular application.

The prototype underwent several months of vigorous testing in the Carrara marble quarries, in which the most expert operators in marble extraction made the machine work at full speed and for long periods. The result was, the New Holland B100C backhoe loader passed with flying colours, and made its official debut at the Marmomacc trade fair (VR) in autumn 2013.

Fitting a backhoe loader with a chain cutter is an alternative to diamond wire cutting machines, normally used to cut large blocks of marble (or “bench walls”). However, the New Holland solution offers greater safety and a considerable reduction in working time.

Diamond wire cutting machines do not move autonomously, but must be positioned on tracks that run next to the blocks to be cut. This operation lengthens working time considerably. The New Holland Construction backhoe loader, however, is able to move up to the marble blocks autonomously and square them up, to allow them to then be transported by truck to the facilities dedicated to transforming them into slabs.

The first B100C backhoe loader designed for quarry work was purchased at the start of 2014 by Grupo Frazao, an important Portuguese company in the mining sector. Shortly before hand, another customer, Solancis, also Portuguese, tested and subsequently purchased the prototype.

The New Holland Construction B100C backhoe loader

Like all backhoe loaders from the new New Holland Construction C Series produced in the Lecce plant, the B100C is equipped with an engine that meets with the strict Tier IV Interim (EU Stage IIIB) emission standards. The 3.4 litre engine produces 97HP. Developed by FPT Industrial and produced in the Turin plant, this engine is particularly responsive and frugal.

In addition to more efficient engines, C Series backhoe loaders are equipped with the LDS, load sensing system, with a load sensor and a variable displacement pump. Together, this system reduces consumption considerably.

The B100C backhoe loader also has a new base configuration which includes Powershuttle transmission and mechanical controls, gear type pumps, two front and rear lights and a ROPS-FOPS cab.

The forward-tilting engine hood is easy to open and provides excellent ground level access to the points that require routine maintenance.