

BRAKING SYSTEM FOR MASCHIO GASPARDO MACHINERIES



In 2019 **Maschio Gaspardo Group** decided to start the activity aimed to update the homologations of the machines according to the new European regulation 2013/167. The group chose **Safim** as partner for the braking systems and the homologation support.

Maschio Gaspardo Group is widely known and it trades internationally, the possibility to offer their products throughout Europe passing only a single homologation is, therefore, a great advantage both in terms of construction and of homologation. The products range offered by this customer covers the trailed equipment intended for agricultural processing, including round balers, seeding machines, and soil working machines.

Safim has been involved right from the initial stages, in order to find the most suitable solution for all the Group's machines, which, due to their different spaces, volumes and characteristics, require specific studies, both from the point of view of the choice of components and for their positioning inside the vehicle. A decisive role, and not less important, played the need to standardize, as much as possible the solutions, in order to reduce the number of variations to be introduced during the construction phase.

In 2019, we started working on the first group of machines, the round balers, studying the braking system and following the preparation of the relevant homologation, and then continued with other types of vehicles.

The case we are presenting today is related to a seeding machine where several challenges were faced.

Safim is continuing to work side by side with the customer with an planned program that covers all the machines of the range.

CASE STUDY

The Case: EQUIP A BIG SEEDING MACHINE

The Challenge: RIGHT COMPONENTS AND VERY LOW SPACE

The Solution: BRAND NEW TAILORED COMPONENTS

Machine: seeding machine (largest model in the range)

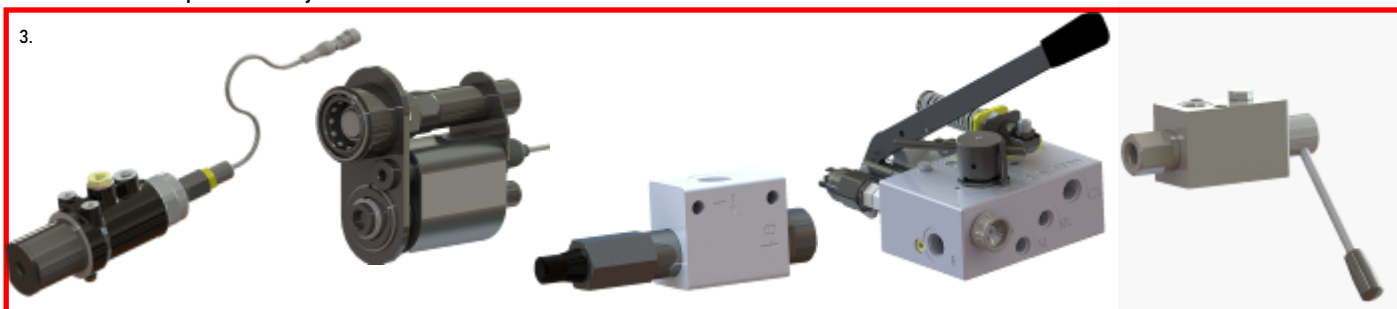


Features to consider: small footprint for components, masses close to axle capacity limits, hydraulic brake integrated into the axle, large tires size.

Collection of machine data and elaboration of a first draft calculation for the definition of the components. The results immediately showed that through standard components the optimal parameters for braking with the regulations would have not been achieved.



Study of a specific solution through the adaptation of existing components and the introduction of an oil-oil converter in order to be able to increase the braking pressure up to the necessary values to meet the performance requirements without stressing the mechanical components beyond their limits.



To develop the converter we started from a component with similar characteristics but introducing a series of design changes to make it compatible with the customer's application thus changing the original configuration of the starting component used.

Once the solution and the components have been identified, they are installed on the vehicle. During this phase, Safim accompanies the customer by carrying out specific braking tests in order to check the functionality, efficiency and suitability of the system in conformity with the regulation. This step is essential for a successful homologation or even to detect any problems and specific adjustments to be made to the system and thus avoid unpleasant surprises on the day of homologation in the presence of the official.



During the official homologation we provide the necessary equipment to perform all the static and dynamic tests required. On this occasion, the homologation event was held at the premises of Morsano al Tagliamento, where we supported the customer throughout the event, which ended successfully.