

# Forming an attachment

WITH COUNTLESS VARIETIES OF AGRICULTURAL IMPLEMENTS NOW BENEFITING FROM BUILT-IN HYDRAULIC SYSTEMS, A CLOSE PARTNERSHIP WITH A LEADING SUPPLIER ALWAYS MAKES SENSE...

▶ To satisfy the demands from the agricultural and construction markets, Marzocchi Pompe has developed a number of specific products that integrate relief valves, electroproportional, priority and anti-cavitation valves, and hi-low systems. The current Marzocchi production range covers 0.19-200.3cc/rev and is divided into eight groups according to gear size. Within each group, the different displacements have been obtained by changing the width of the gears.

A wide range of flange, shaft and coupling configurations is available, and these components can also be designed according to customer specifications. The cast-iron versions are available in groups 1, 2 and 3. Maximum operating pressure depends on pump displacement and type: this varies on average from 230 bar on aluminum models and 280 bar for cast-iron versions. All products can also be supplied with Viton seals and special versions are available for temperatures between -40° to +120°C.

Mono-directional and bidirectional motors are divided into three families (1, 2, 3) covering a range of displacements between 2.8-87cc/rev. The maximum working pressures for the motors are similar to those established for the pumps and they can deliver torque up to 250Nm and power up to 60kW.

## The tools of the trade

In recent years, the mechanization of the agricultural world has meant that agricultural machinery OEMs have needed to develop specific tools for each application to more effectively help operators in their tasks. There are now many types of attachments available for each type of operation, such as pruning, **topping** or harvesting agricultural crops. The more complex implements are equipped with independent hydraulic systems, or are directly connected to the circuit of the tractor itself.



LEFT: ALM 1-S-9-VM-E1/60 Marzocchi gear motor with a relief valve built into the cover, and ALM 2BK1-D-12 gear motor with electro-valve and pressure gauge port

ABOVE: BMV's FL200P pruning machine runs on at least 40 l/min of oil and has four hydraulic movements for elevation, inclination, sideways movement and top inclination

BMV and Marzocchi Pompe's partnership started over 10 years ago and is still going strong. Founded in 1974, BMV has worked for decades in the design and manufacture of agricultural machines and equipment. Its headquarters is in Alba, Cuneo, the famous Italian wine region, where there are some of the most prestigious cellars and where the most advanced agricultural equipment for vineyards is produced.

Marzocchi supplies a wide range of its products, both motors and pumps, for BMV's implements. The technical cooperation between the two has enabled the design and production of highly reliable pruners for very large vineyards. Their synergy has ensured that all BMV's specifications, such as reliable use in very harsh conditions and low temperatures, are effectively met.

In recent years, the brand has emerged among the world leaders for machinery for orchard, vineyard and cutting plants in general. Its wide range of implements is currently exported in a variety of versions, in over 50 countries on five continents. The range of products includes vineyard machinery, such as vine-shoot removers, trimming, pre-pruning and leaf-removal machines; fruit machinery, such as pruning and thinning machines; and forestry equipment, such as cutting bars that can be applied to road brush cutters, wheeled loaders, telescopic handlers and excavators.

The use of hydraulic systems in forestry and agricultural machinery offers many advantages, for example, installation versatility: the mounting of the pump and the motors is no longer constrained by the position of the PTO, as it may be positioned freely to meet the application requirements. Pumps and gear motors are very compact power units, where the speed of operation depends on the oil flow in the circuit and is not necessarily dependent on the speed of the tractor engine. The rotation speed can also be hydraulically increased to obtain values of speed or torque much higher than would otherwise be available. Finally, any repairs and replacement of the hydraulic components are simple and fast. **ivT**

*Daniilo Persici works in the R&D department at Marzocchi Pompe SpA, where he leads test, FEA and CFD analysis*



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