

Self-Priming Adaptor Receives EIMA's Top Innovation Award

Hypro's latest pump innovation, the Self Priming Adaptor (SPA) for Centrifugal Pumps has been awarded the Award for Technical Innovation at EIMA 2008.

The award is given to innovations that demonstrate improvements capable of ensuring technical progress in agricultural mechanization. The judges are all Italian agricultural machinery experts, drawn from organizations such as the AIIA, Unacoma, the University of Bologna, the Ministry of Agriculture CRA and ENAMA.

The SPA offers fast and reliable self-priming for any closed impeller centrifugal pump, making it possible for a single, high performance, low cost centrifugal pump to be used for both tank-filling and spraying. It is a very simple, compact and lightweight device that is easy to fit and requires no ongoing maintenance.

According to Roger James, Hypro's European Product Manager:

“In our tests, we used different pumps to fill a 5000L sprayer tank. Hypro's 9306 centrifugal pump fitted with the SPA can run at 700 L/min, filling the tank in just 7 minutes, a significant improvement over other pumps used in the test. It is quite feasible to save 14 minutes each time a 5000L sprayer is filled and if the time saved is used instead for spraying it means another 20 ha can be sprayed at 12 km/hr and 200 l/ha in an 8 hour day. The flow capacity of centrifugal pumps is also ideal for spraying high volumes, for example of liquid fertilizer, without having to compromise forward speed.”

The SPA works by supplying an initial quantity of water to create a simple priming circuit that develops pump suction. Water and air is then drawn through the sprayer suction line and routed to the SPA. The SPA acts to vent air out returning only water to the pump. Priming is consistently reliable even where water levels are 3 metres below the pump. The SPA is simple to operate with manual or automated valves that redirect the flow and isolate the SPA once the circuit is primed.

UK based Landquip Sprayers has already incorporated the SPA and Hypro's 9306 centrifugal pump onto their Intrac Trailed and CV Self-Propelled sprayer models, which have boom widths up to 40m. According to Richard Abbot, Landquip's Managing Director;

"The use of centrifugal pumps on crop sprayers has been limited in the past because they do not self-prime, which is a problem - especially if the water supply is at ground level or below. A separate transfer pump can be used to fill the sprayer but that means incorporating 2 pumps into our sprayer design which has not been an attractive option as it adds cost, weight and complexity to the system. The arrival of the SPA eliminates these drawbacks and has allowed us to transform Landquip's approach to sprayer plumbing and the capability of our sprayers overall".

Both the Centrifugal Pump and the SPA are light in weight and compact. They can be located up to 3 metres apart, making it easy to design and fit the pumping system to sprayers

For sprayer operators, a centrifugal plus SPA pumping system is very easy to work with. It fulfils tank filling and pumping jobs with ease and with no moving parts it is also reliable and very easy to maintain, which helps to minimise down time and keep sprayers working.

The SPA will be shown on the Hypro Stand B6 in Hall 26 at EIMA. Also on display will be Hypro's 9306 hydraulically-driven Centrifugal Pump and the new gear-driven 90027 Centrifugal Pump. The SPA will also be shown amongst the Technical Innovation award winners at the entrance to the exhibition.

Self-Priming Adaptor Configuration

