



### FOR AUTOMATIC GPS SECTION CONTROL ON SLURRY SPREADING TOOL

The definition of the "Task Controller – Section Control" ISO standard has opened the door to an efficient management of plant protective agents, seeds, fertilizers, etc. Since JOSKIN has always been considering slurry as a fertilizer, it proposes now to apply this standard to its slurry injectors and spreading booms, which are now able to open/close the different sections individually.

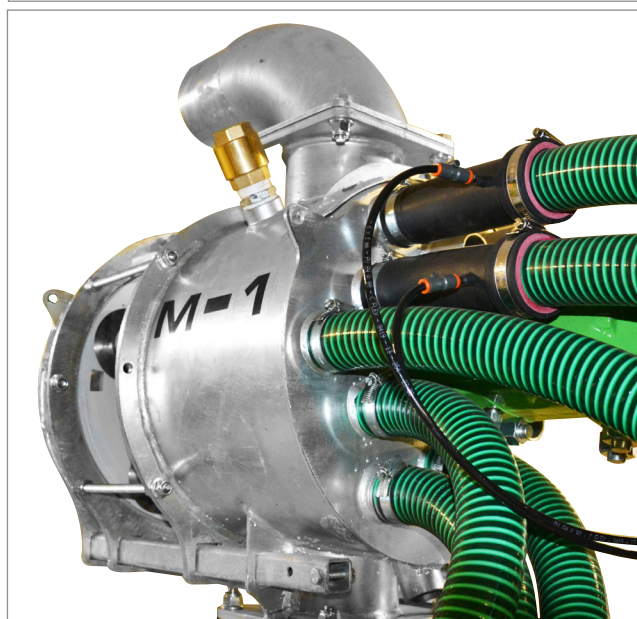
The ISO Section Control standardized function allows "to automatically manage the spreading widths, e.g. for sprayers, fertilizer spreaders and precision sowing machines, according to the GPS position and the desired overlapping degree".

In other words, any GPS that can send "Section Control" standardized GPS data to the "IsoBus" standardized data bus can be used to control the sections of any tool, provided that it is controlled by an IsoBus application.

JOSKIN has been proposing the IsoBus control on its slurry spreaders for many years and it has already fitted 200 machines with this system. Its IsoBus application can now be extended to the "Section Control" standard to automatically open/close the different sections of a slurry injector or spreading boom combined to the spreader itself.

An outer GPS antenna sends the position signal according to the Section Control standard and the IsoBus application compares it with the previously recorded positions in order to close the sections on areas which have already been fertilized.

Within the framework of ever more precise controls of the ammonia losses linked to spreadings, such a device will certainly achieve an increasing success to meet the legal requirements: overlaps are in this way avoided, notably in adjacent lines, headlands, corners and when getting around obstacles. The resulting more precise spreading management allows to make sure legal requirements are not exceeded in these situations. In the Netherlands, this technique is besides the subject of an incentive programme.





In order to implement this application, JOSKIN manages the different spreading lines of its spreading tool by controlling the hydraulic or pneumatic pincers which close the hoses per sections, e.g. 12 sections on a JOSKIN Pendislide spreading boom of 12m. Each section of pincer(s) is controlled by an individual electrovalve and the outer sections of each side can be limited to one single element (one single hose in the case of a Pendislide) in order to guarantee a control as precise as the precision level of the GPS (20 cm).

So, in adjacent passages, only the outer hose will stop being fed if the driver is coming too close from the last row of the previous passage. The timing of this closing process can moreover be configured by the operator: in order to avoid an important empty space between two adjacent passages, the operator will be able to adjust the breaking process so that it can be activated when the overlapping degree reaches 50% (which corresponds to driving with the outer share in the track of the last share of the previous passage).

Of course, the IsoBus box immediately notices the pressure and flow differences resulting from the section breaking and accordingly controls the main feeding valve of the macerator in order to keep the desired application volume.

