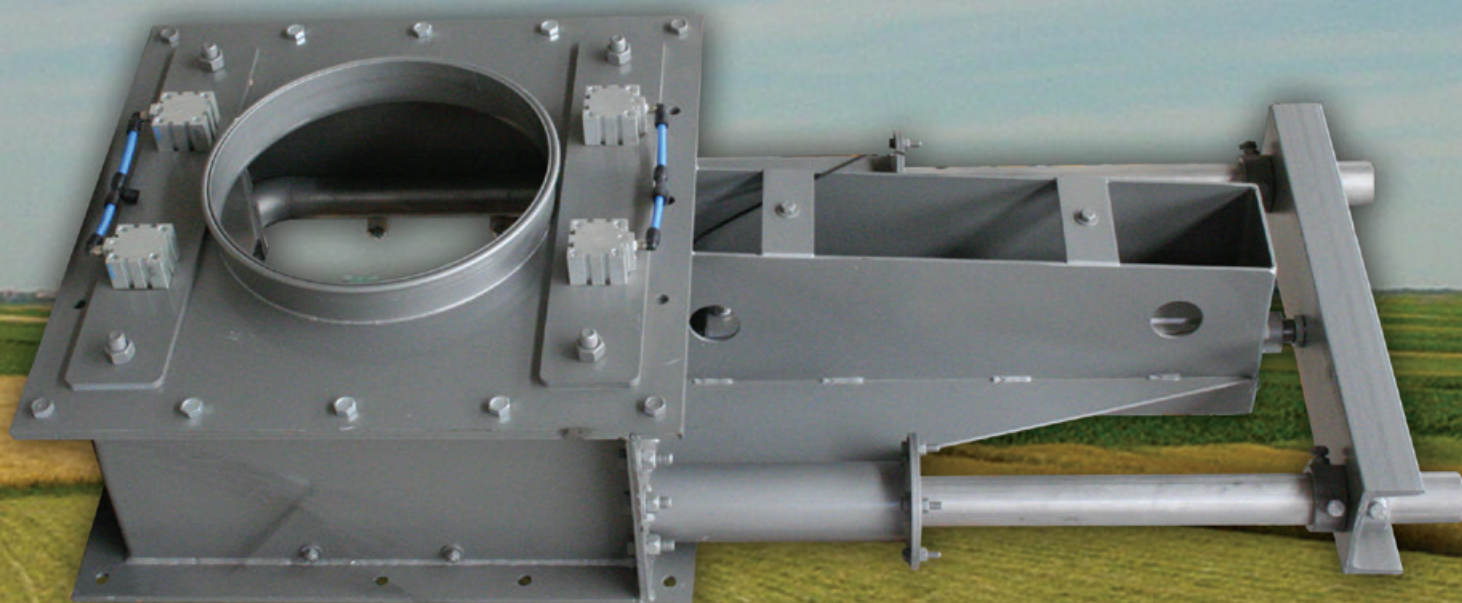




TPLG : Tout pour le grain
INTRODUCING
LYNX!



**A new in-line grain sampler with cross-flow
sampling technology.**

www.toutpourlegrain.fr

2 rue des jonquilles 89260 Perceneige FRANCE

Tél. : +333 86 88 98 00 - Fax : +333 86 88 90 20

contact@toutpourlegrain.fr

Over the past forty years a large number of sampling machines for granular and powdery material have been developed (especially cereals samplers).

In general, material is being sampled upon delivery, in the course of some processing operation, or upon shipment.

Most of the time, grain samplers are installed next to the weighbridge where they sample material from incoming and outgoing batches of grain.

For example:

A : Grain sampler HERON Standard

B : Grain sampler H3000 COBRA (10 m travel distance)

C : Grain sampler H3000 Gyroscopic style

In order to monitor the quality of the grain or the stage of transformation of batches of cereals (e.g. before or after a cleaning process, before or after drying, etc.), process samplers such as «MOUSTICK» are used to take samples at a frequency and in a quantity that are set as desired by the operator.

cf. image opposite: **D** : Moustick closed

E : Moustick open

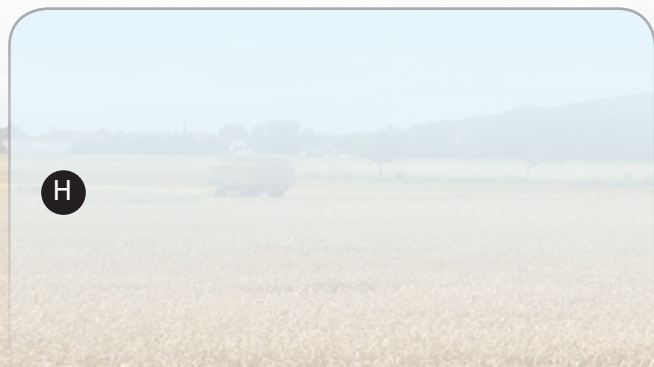
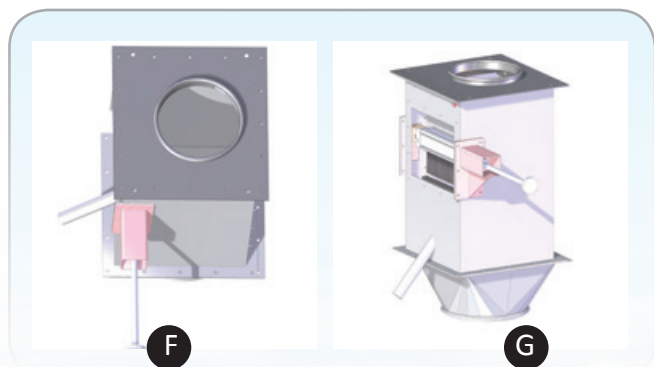
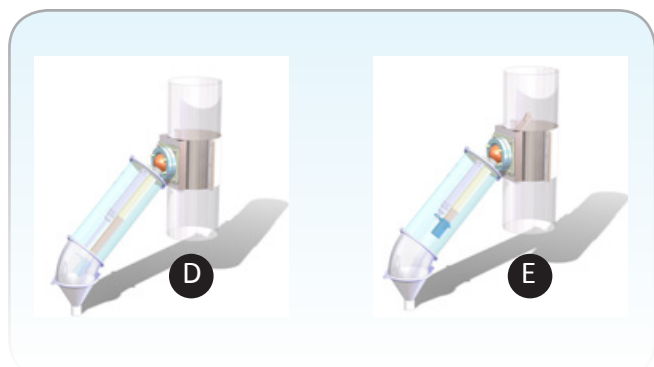
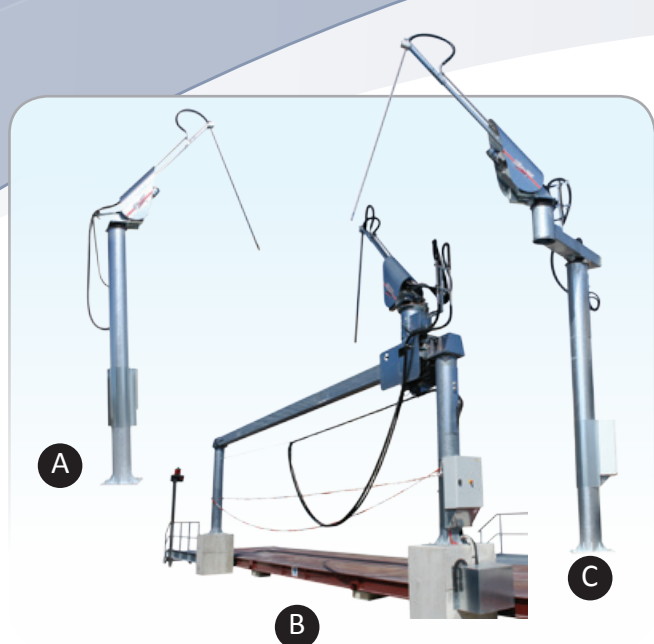
This kind of sampling machines provides its user with accurate but very much isolated information. In order to achieve a representative sample of a flow of grain, though, the sample should ideally cover an uninterrupted «slice» of the stream of material flowing through the duct.

To this end, so-called cross-flow sampling systems have been developed, which feature a gravity sample intake pan moving to and fro across the grain flow. cf. **F**, **G** and **H**.

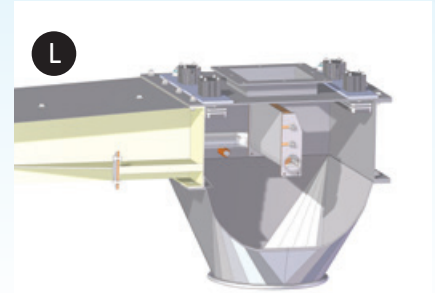
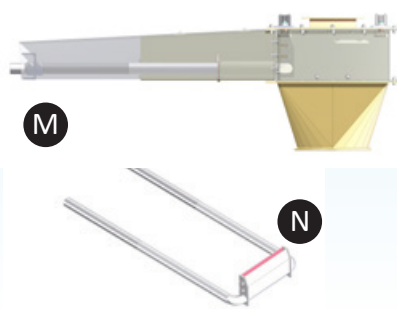
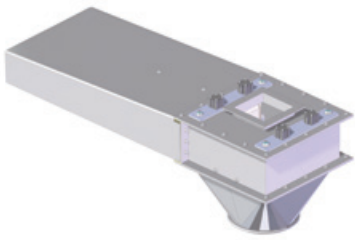
Other machines have also been designed, which execute a quarter-turn swivel movement of the gravity intake pan. Cf. **J** and **K**.

All of these gravity samplers have some drawbacks such as leakage problems now and then, and, most of all, big problems of bulkiness, especially excessive height (in excess of 1000 mm).

It is however very rare (on an existing grain handling structure) to find abundant space available for such devices under the elevator discharge spout or on the inlet of a belt conveyor in a barge loading station. Yet those are precisely the points where a cross-flow sampler should ideally be positioned: right where the grain exits to be shipped.



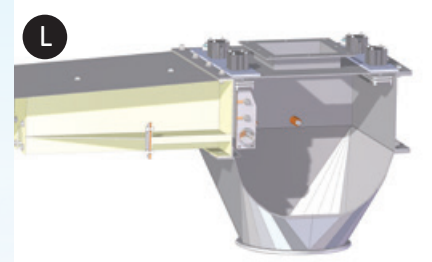
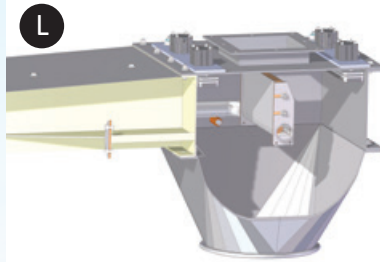
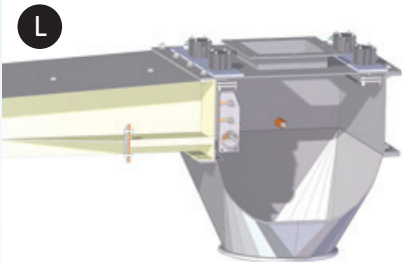
The sampler crosses the grain flow in a horizontal to-and-fro movement.



With this in mind, we at TPLG decided to design a new cross-flow cereals sampling device that does not rely on gravity intake. **L**

The «non-gravity» intake allows for a reduced bulk volume of the system, especially for a reduced height. The sampler is driven by a pneumatic actuator **M** which moves a U-shaped tube with a sample intake pan **N** in the middle.

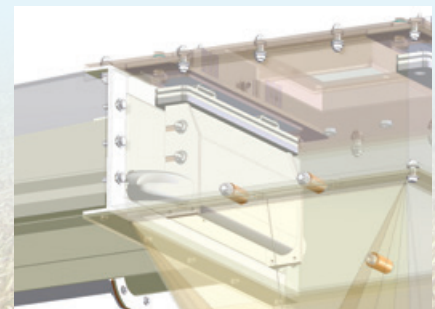
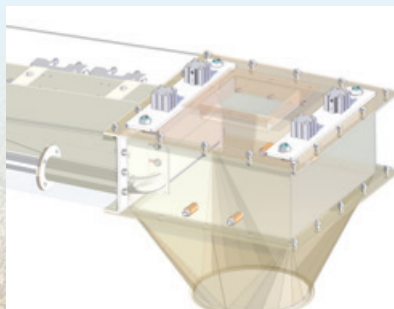
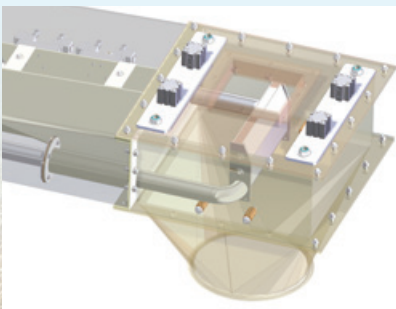
The intake pan reciprocates through the grain flow and thus scoops up as much as a 1.3 litre dose of material (in a 200 t/h flow). The volume of the dose may vary with the speed of the pan travel (which is adjustable through a throttle on the pneumatic actuator).



The intake pan travels across the grain flow on the upstroke and then returns to its starting position on the down-stroke, crossing the flow again.

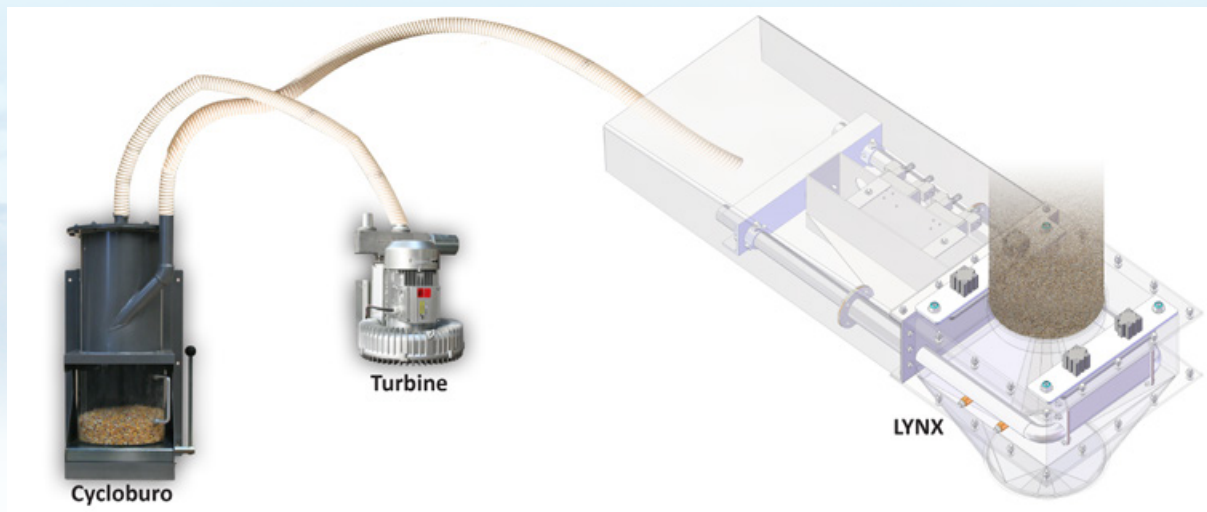
Material is taken in during each stroke. Shutter strips are installed at each end of the path so as to provide a defined opening period and avoid stray intake.

With the intake pan thus closed, no more material can penetrate into it for as long as the pan remains in the closed end position.

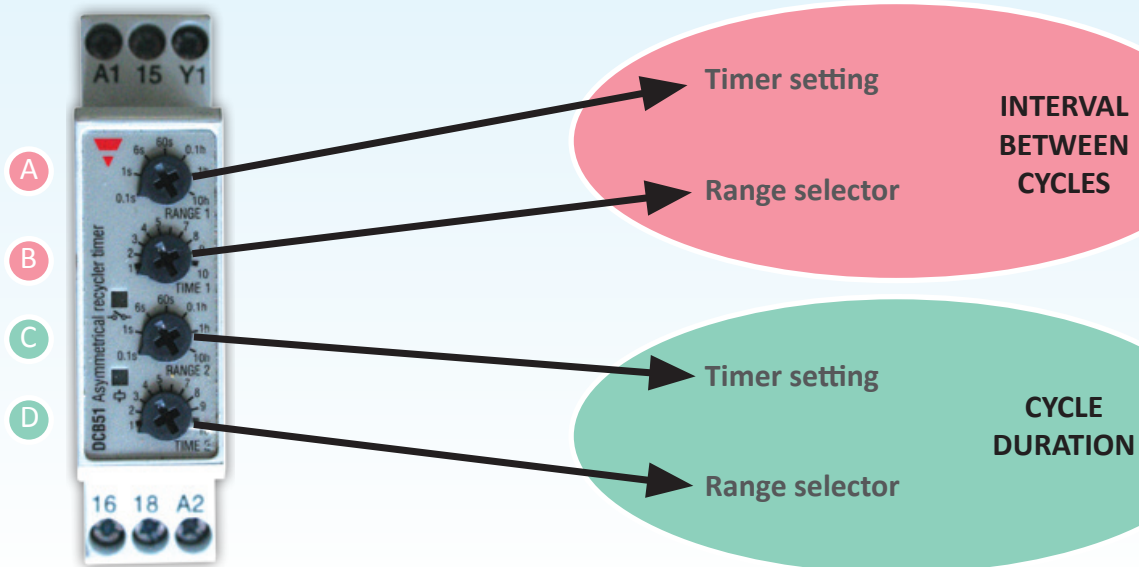


The closure of the intake pan is ensured by two short stroke (10 mm) actuators. When the intake pan has reached the end of its stroke, the shutter is activated and the intake opening is completely sealed off.

At the end of each cycle the sample taken in is pneumatically conveyed to the laboratory.



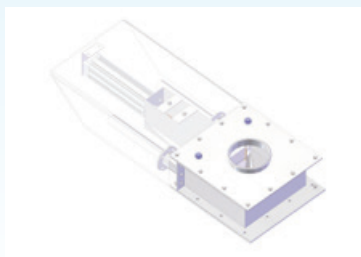
At the end of the intake cycle, the sample is conveyed by vacuum to a receiving container located in the laboratory. The sample transport can cover distances up to and above 100 metres. The conveying distance can be easily adjusted to by means of the adjustable controller for the vacuum turbine.



Example of parameter settings :

Set range selector **A** to 60 s and set timer **B** to 8 to obtain $8 \times 60 \text{ s} = 8 \text{ minutes}$ interval between cycles
Set range selector **C** to 6 s and set timer **D** to 5 to obtain $5 \times 6 \text{ s} = 30 \text{ seconds}$ cycle duration

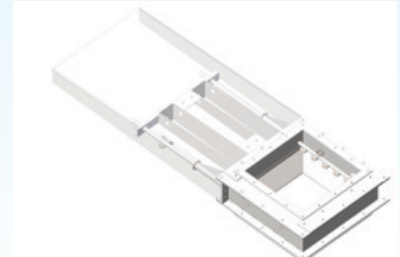
From LYNX Ø 195 mm



to LYNX Ø 324 mm



up to LYNX 1000 x 1000 mm



LYNX is available in different sizes.