



MORILLON HYDRASCREW

Hydraulic planetary screw for inclined or flat bottom silos



**DESIGN AND MANUFACTURE
OF UNLOADERS FOR DIFFICULT TO FLOW MATERIALS**

 **MORILLON**
SILO UNLOADING SYSTEMS

The design and manufacture of unloaders for difficult to flow materials



EDITORIAL



«When I joined the family company in 1984, my father Théodore Morillon and his team drew on their long experience in the field of storage and material handling to lay the foundations of the unloading activity with the Hydrascrew. The innovative hydraulic controls and the original booster enabled the company to quickly forge a good reputation in the field. Initially fuelled by the demand from the company's traditional customers (storage of soya and rape meal, bran and gluten), the activity soon diversified, both in terms of markets (wood industry, environmental applications) and geographically. Today, the company is internationally recognised as a leading actor in the storage of bulk materials.



Guaranteed performance for our customers is the challenge that we face every day and what drives our company and its personnel. We have been proud to rise to this challenge for nearly 150 years*!»



Laurent Morillon - President

*Morillon was created in 1865 by the great-great grandfather of the current owner, who was a mill builder

Your need

To unload difficult to flow materials that are heavy or light, powdery or fibrous, dry or damp, and that do not easily flow by natural means.

Principle

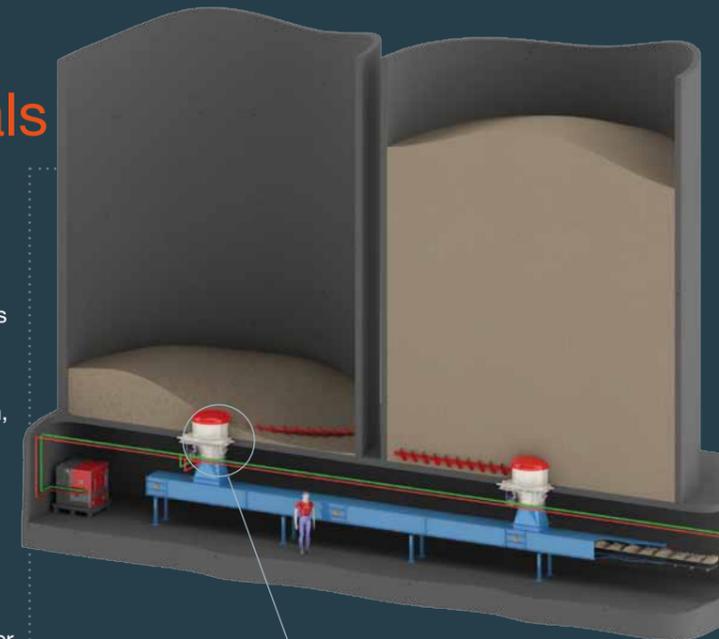
A screw, driven by a directly coupled hydraulic motor, sweeps the radius of the floor of the cell through 360°, unloading the product according to the «first in, first out» principle.

Our expertise

Thanks to our broad experience of extraction applications (more than 2,000 systems worldwide), our sales and R&D teams can support and advise you to better define your needs.

The fully hydraulic transmission means that the hydrascrew is reliable and long-lasting, and is capable of transmitting high levels of torque at low speeds, in particular thanks to the booster starter system.

A number of hydrascrews can be connected to the same power pack in order to unload several silos simultaneously or not.



APPLICATIONS



Ashes



Coal



Glass wool



Urea



Sludge



Wood pellets/wood chips



Gypsum/Cement



Soya meal/DDGS



Plastic waste



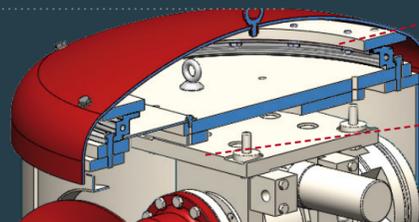


Hydrascrew, a reliable solution that has been proven worldwide



Tried and tested quality of production

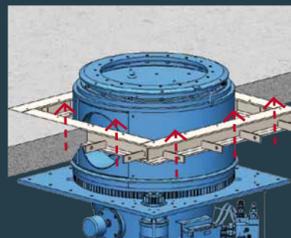
Robust and long-lasting



Mounted on ball bearing crowns for the crown models

Pieces thicknesses calculated with the maximum safety coefficients

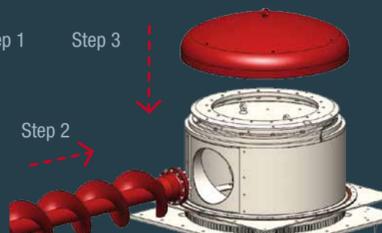
Easy and safe to install Minimum dimensions



Step 1

Step 3

Step 2



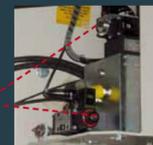
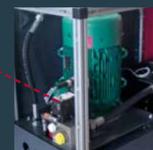
Easy to maintain



The filter cartridges are replaced once a year (or every 4,000 h)

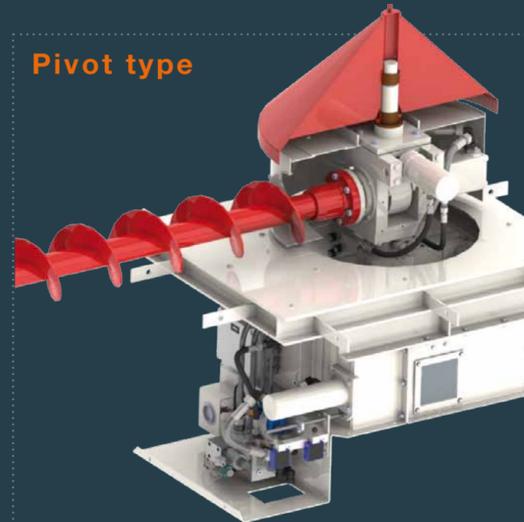
Easy access to the interior of the machines when the silo is full

Greased once a year (or every 4,000 h)



Two solutions to meet your needs

Pivot type



- An economical solution
- Can be used with very humid materials

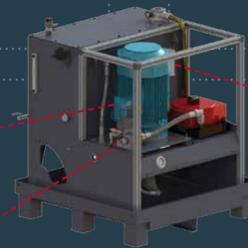
Crown type



- High unloading capacity
- Very robust
- Access inside even with full silo

High-performance motor from 5.5 to 75 Kw and very quiet too (max. 80 dBA)

Manual or analogic flow control



Connection box

Two hydrascrews can be operated at the same time (on demand).



Connection box or optional control cabinet.



The mechanical benefits of a hydraulic system

- smooth and supple operation to protect the screw
- speed regulation without any loss of yield, at constant torque, without speed variation or overheating
- hydraulic limitation of the torque on the planetary gear advance to conserve the unloader screw and the transmission
- possibility of turning in the two planetary directions

Unloading in the following silos*:

- new or existing
- smooth/corrugated panels
- bolted or welded panels
- metal or concrete silo bottom
- Ø 2 m to Ø 12 m with the pivot model
- up to Ø 20 m with the crown model

*conditional on validation by calculating the resistance of the silo for eccentric type unloading

The applications

Hydrascrew

- Unloading in explosive atmospheres (ATEX) 
- Unloading hot and/or corrosive materials (ashes, ice)
- Unloading abrasive materials



Optional carbide bars and coatings for abrasive materials

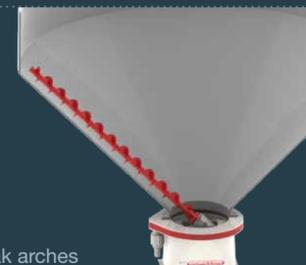
Hydrascrew inclined at $\leq 15^\circ$ *



- Adaptation to the silo bottom available for fluidisation
- Enhances water flow when washing
- Facilitates product flow

*Other angles on demand

Arch breaker from 45° to 60°

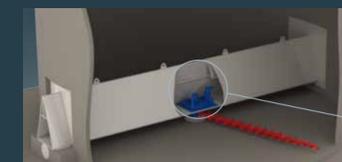


- The screw is used to break arches (flours, ores, pellets, plastic waste, etc.)
- Adaptation on the silo flange
- Easy to start
- Refined mechanics
- From Ø 2 m to Ø 10 m (please contact us for other diameters)

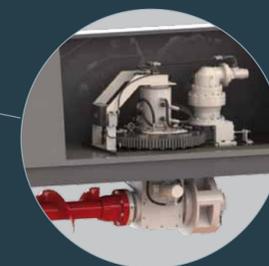


Recovery screw or other equipment to control the flow

Hydrascrew built into a beam



- Access to the interior of the beam
- Beam system for use with very high density materials



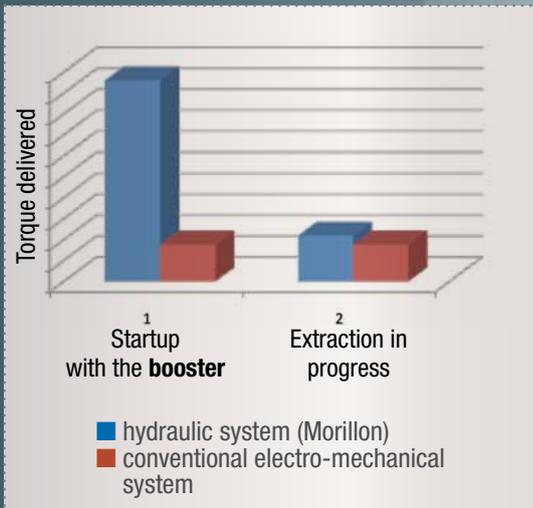
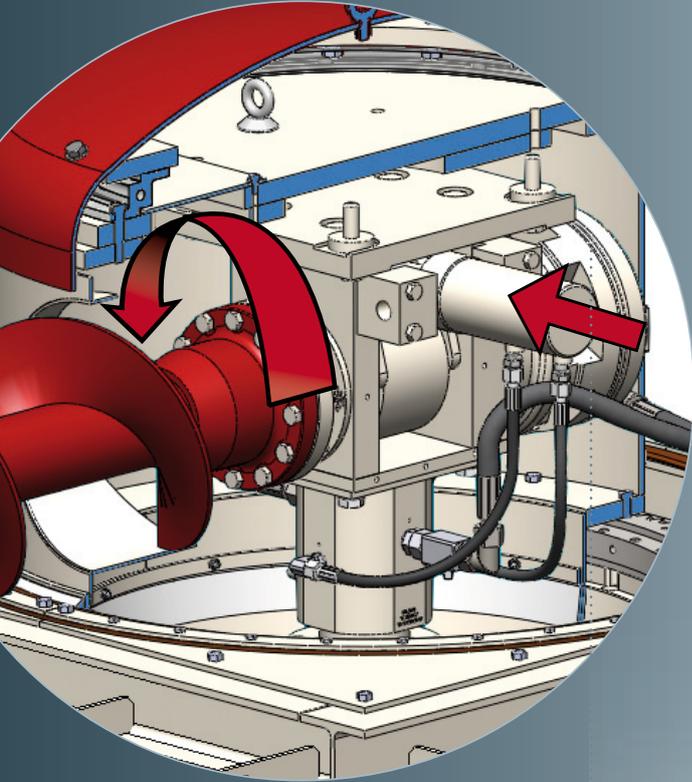
Twin-screw hydrascrew



- Reduced risk of caking thanks to the double screw
- High flow rates of up to 500 m³/h

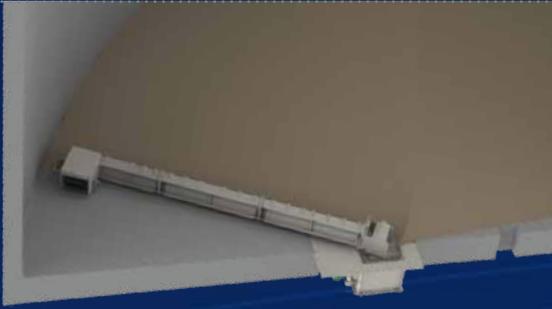
the power of hydraulics

THE BOOSTER SYSTEM



- The Booster is used to start the machine when the **silos are full** and when the screw is in any position inside the silo (there is no mandatory parking position)
- A hydraulic solution with unmatched **performance**
- The torque of the booster is 10 to 12 times higher than the nominal torque

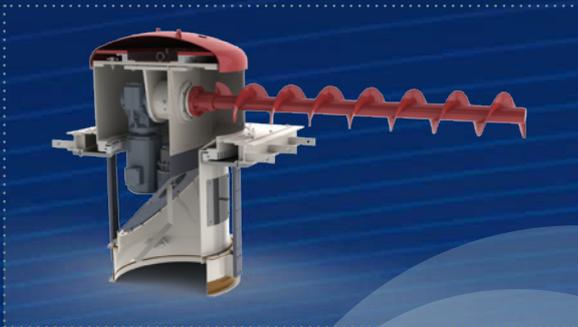




SPIROGYRE

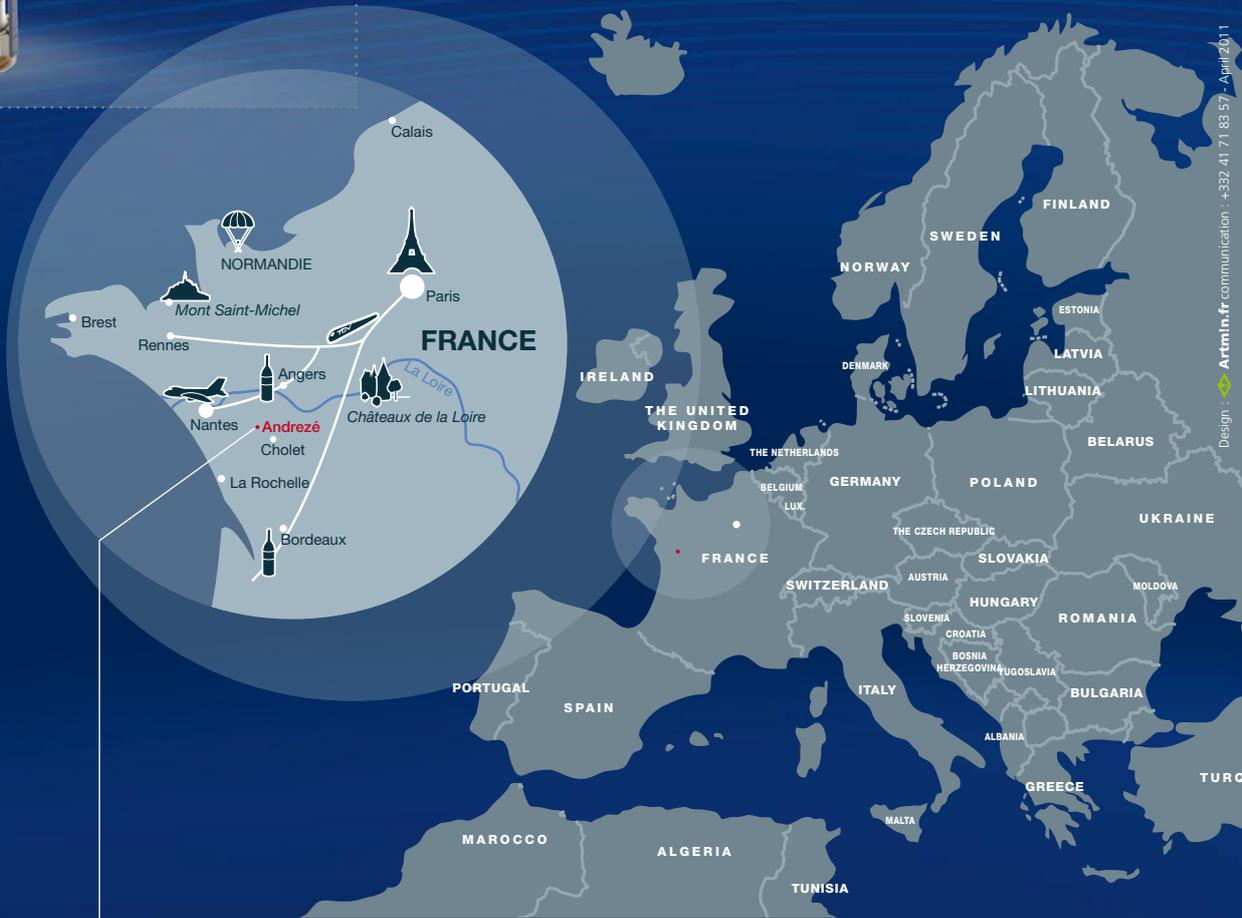
The Spirogyre bin sweeper screw is designed to unload residual banks of cereals and other naturally flowing materials that are stored in silos with flat bottoms measuring between 4 m and 38 m in diameter (25 to 300 T/h).

We also offer special versions to unload paddy rice, oil seeds and certain granules, such as wood pellets.



TE type ELECTRO-MECHANICAL unloader

For silos measuring 2 m to 7 m in diameter



48 rue des Mauges
49600 ANDREZÉ - FRANCE

Tel. +33 241 565 014
Fax +33 241 565 637

contact@morillon.eu
www.morillon.eu

