

# CLL COMPACTOR & GRANULATOR



with you, step by step



## COMPACTOR & GRANULATOR

CLL



The compression process is highly sensitive to the shape, composition, and size of the powder mixture to be processed. The lack of homogeneity of some low density powdered products can lead to poorly resistant or even broken tablets, making it necessary to compact and granulate the mixture. Leal has designed a compact equipment suitable for both processes.

The compactor is the ideal equipment to obtain a resistant granulate from a powder mixture, by increasing density and reducing the air content inside.

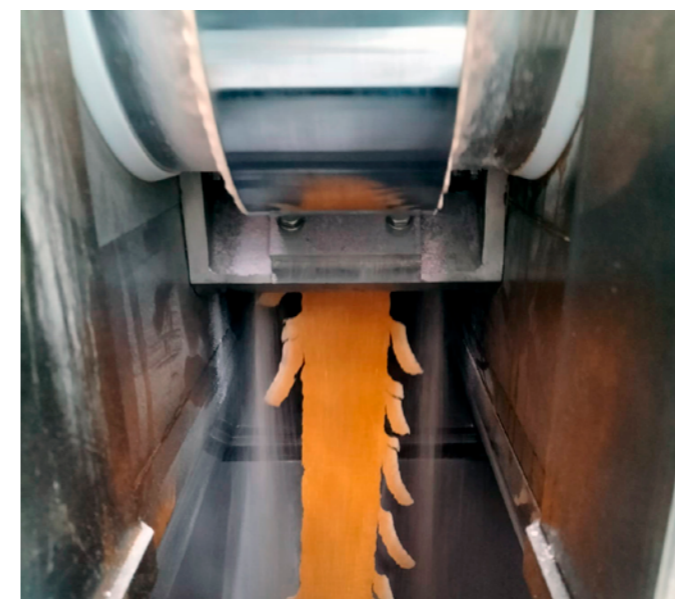
The application field for this equipment is very extensive. We design and implement compactors to densify powder and produce tablets for the pharmaceutical, chemical, and detergent industries, as well as for the manufacture of briquettes.



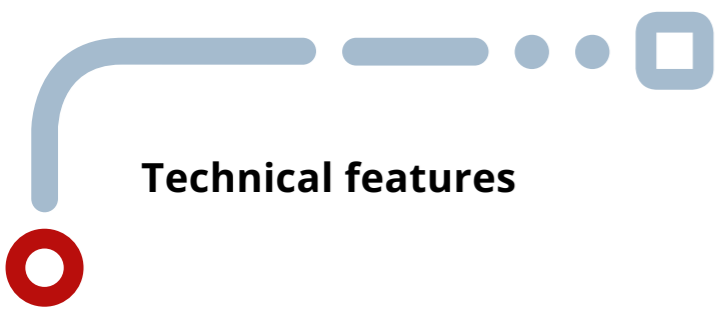
CLL-160 compactor.

### OPERATION

The compaction is carried out by two rollers that rotate in a convergent direction, allowing to obtain compact sheets. These sheets then go through a subsequent granulation process by means of a triple system composed of a propeller, a blade and an oscillating rotor against a sieve.



Picture of a product sheet at the discharging of the compaction unit.



## Technical features

### FEEDING UNIT

Constant product feeding through a hopper equipped with an endless screw.

It incorporates a deflector at the bottom of the hopper that guides the product towards the compacting rollers, allowing for a homogeneous distribution in the compaction chamber.

This system allows for easy control of the sheet thickness by adjusting the speed of the feed screw: a higher speed result in greater thickness.

The entire feeding unit can be easily cleaned and disassembled thanks to the hydraulic unit that lifts the whole assembly.



Detail of the endless screw installed in the feed hopper. Hydraulically liftable head.

### COMPACTION UNIT

The compaction unit is composed of two rollers rotating in a convergent direction. These rollers can be smooth or engraved, to obtain compact sheets or with carved patterns to produce briquettes with the required geometry for the process.

The compacting system is equipped with a cooling circuit that maintains a constant temperature inside the compaction chamber, preventing product degradation due to overheating.

The hardness of the sheet can be controlled by adjusting the pressure parameters of the rollers and the rotation speed: a higher pressure results in greater hardness.

Lleal has designed this compactor for quick and easy cleaning, so the compaction unit features side access doors.

We offer models with a cantilevered roller arrangement. The main advantage lies in the possibility of changing, quickly and easily, the rollers for cleaning or format changes.

Detail of the compaction rollers.



## Technical features



### GRANULATION UNIT

Lleal's compactor features a combined chopping and granulating system, consisting of:

- » A helix that fragments the compacted sheet.
- » A chopping blade that reduces the size of the fragmented plates.
- » A continuously rotating rotor that forces the product through a sieve, ensuring uniform final particle size.

Depending on the product to be treated and the process requirements, we offer sieves made of materials and with mesh sizes adapted to specific needs.



### ADVANTAGES

- » Compaction and granulation system integrated in a single unit.
- » Easy cleaning thanks to the lifting system of the feeding unit, to the doors that allow access to the compacting rollers, and to the granulation rotor. This eliminates the risk of cross-contamination.
- » Constant temperature inside the compaction chamber, eliminating the risk of product degradation due to overheating.
- » Availability of materials and mesh size sieves suitable for each process requirement.
- » Availability of models with cantilevered compaction rollers for easy to disassembly.

## Technical Data

Model	Motor kW	Production Kg/h	Roller dimensions mm	
			Diameter	Width
CLL-112	7	up to 30	112	30
CLL-160	13.5	up to 200	160	80
CLL-224	26	up to 350	224	30, 50 & 80
CLL-320	40	up to 1,000	320	120
CLL-448	80	according to product	448	160
CLL-540	120	according to product	640	200