

# MECHANICAL LIOEXTRACTOR



**COMPRESSES, DEHYDRATES,  
SHREDS, REDUCES VOLUME,  
UNIQUE IN TERMS OF  
ACHIEVED EFFICIENCY**

## SOME EXAMPLES OF USE



### **FORSU (ORGANIC FRACTION OF MUNICIPAL SOLID WASTE)**

It drastically reduces residual moisture by compacting and dehydrating biodegradable waste from waste sorting—such as food scraps, leftovers, and green waste—thereby reducing its weight and volume while optimizing transport, as well as subsequent processing and treatment stages.



### **FORSU TREATMENT SUPPORT**

It compresses and shreds waste produced from FORSU biogas plant processing, achieving a substantial reduction in both weight and volume. This results in a notable decrease in operating costs, particularly for transport and disposal.



### **BIOGAS PLANTS – COMPOST**

It squeezes and separates, with very high efficiency, the liquid fraction from the solid part of the digestate. This allows for better storage management, improved odor control, enhanced recycling and nutrient management, reduced soil compaction, and increased transport efficiency.



### **PAPER MILL PULPER WASTE**

It compacts and dehydrates wet pulper waste from paper mills to a residual moisture content of approximately 15%, significantly reducing volume and weight. This translates into considerable savings in operating costs for landfill or incineration disposal.

## ADVANTAGES OF THE WRS LIOEXTRACTOR

- Homogeneous and optimized output: the system produces a liquid fraction and a highly dehydrated, finely shredded solid fraction, increasing efficiency in management, transport, and agronomic or energy reuse of by-products.
- Integrated and automated operation: the WRS Lioextractor automatically adapts to the characteristics of incoming material through intelligent control and monitoring logic.
- Innovative combined dehydration and crushing system: achieves exceptionally low residual moisture and maximum volume reduction.
- Advanced control software: enables precise regulation of outlet moisture levels and management of electric motor load in combination with hydraulic backpressure.
- Automatic filter washing system: ensures scheduled cleaning of filter modules, maintaining consistently high discharge efficiency.
- Easy maintenance: filters and compression screw can be quickly disassembled for fast maintenance and minimal downtime.

## LIOEXTRACTOR COMPONENTS

- Pressing system equipped with a variable-pitch compression screw and filter modules built in two half-shells for quick and easy replacement.
- Control unit with an electric motor and a transmission assembly consisting of a gearbox and V-belts.
- Hydraulic system featuring a hydraulic power unit for counter-thrust management.
- Electrical system with control panel, PLC, safety devices, and protections compliant with current standards.
- Washing system that keeps all filtering surfaces clean.
- Liquid collection tank for efficient fluid recovery.

## THE LIOEXTRACTOR AND WRS STAND OUT FOR

- Patented technology and proprietary know-how ensuring consistent, repeatable performance over time.
- Enhanced sustainability: the Lioextractor reduces energy consumption and enables wastewater reuse within a circular economy framework.
- Customer verification: clients can test the Lioextractor directly on their own premises to verify its effectiveness on-site, obtaining documented performance results.
- Full process control: through partnerships with affiliated companies, WRS maintains direct oversight at every production stage — from design and manufacturing to sales and after-sales service — providing customers with a single, reliable point of contact.
- Direct technical support and specialized training: each customer benefits from dedicated WRS technicians, with training and continuous assistance included, ensuring operational autonomy and long-term system reliability.



## PATENTES

- ▶ Compression screws and filter shells
- ▶ Filter washing system for continuous cleaning of filter modules, preventing clogging of drainage holes.
- ▶ Quick removal of screw and filters for rapid disassembly and reduced maintenance time.

## LIOEXTRACTOR

### SIZE AND WEIGHT

Maximum length	5624 mm
Maximum width	1305 mm
Maximum height	2070 mm
Approximate weight	10 ton (approximately)

## LIOEXTRACTOR

### INDICATIVE PERFORMANCE

Material	Solid digestate separated	Pulper waste
Capacity	2,5/4 ton/hour input	2,5/4 ton/hour input
Input	75%/80% humidity residual input	75%/80% humidity residual input
Output	20%-40% of residual humidity	15%/20% of residual humidity