

**TIGER DEPACK®**  
PRODUCT LINE

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Find out more  
[www.tigerdepack.com](http://www.tigerdepack.com)

# THE TIGER DEPACK SYSTEM

**Tiger DePack** is the brand that encompasses the trademarked technologies developed for the depackaging of packed products and the separation of materials for the Recovery, Production and Depackaging sectors.

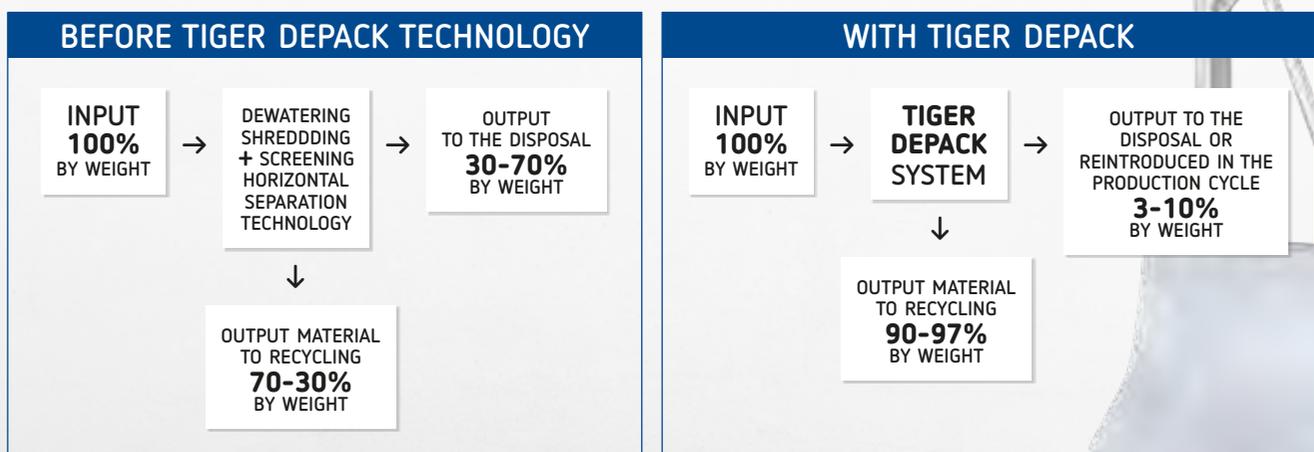
Our flagship model, the HS 10 UNIT, is the technological benchmark in many countries and **TIGER DEPACK** is the trusted supplier and technological partner of the major benchmark companies in the production of daily consumer goods, waste treatment, anaerobic digestion and composting in more than 80 plants throughout Europe, Australia, Canada and the US.

Manufacturing companies that want to directly recover their own production waste from their lines, such as waste treatment plants, represent our main customer base with whom we have honed this technology over the last 10 years.

Our brand is part of **Cesaro Mac Import SRL**, the Italian leader in the waste treatment plant sector.

*\* Tiger DePack HS 10 Unit - New York (US)*

## MASS BALANCE



The Tiger DePack project came about from the need to produce a dedicated technology capable of separating contents from their packaging.

Firstly, the Tiger DePack's separation process occurs using horizontal machine technology used in the farming or food industries which has been adapted to this purpose.

Tiger DePack has surpassed the limitations of the older systems, striking the optimal balance between its mass and the lowest amount of surface area possible.

The primary goal to be achieved was that of separating the organic matter from its packaging, beginning with various types of material.

A simple and fast system was required, with reduced dimensions and with markedly reduced operating costs per tonne.

Designed to carry out the pretreatment of packaged products, extracting an excellent quality of output material in the smallest space possible, with the maximum possible connectivity and lowest possible energy consumption

An efficient tested separating system able to provide a truly amazing end product.

## THIS IS WHY WE HAVE DESIGNED TIGER DEPACK.



# POTENTIAL APPLICATIONS

The main applications of the Tiger system include the depackaging of Source Separated Organic (SSO) or expired products, the recovery of waste treatment and production plant streams in which the Tiger is directly connected to the production line.

Tiger has been the best technological solution for the treatment of the most complex material to recover for over 10 years.

Tiger DePack technology can potentially be used in a multitude of applications. Conceptually, these can be grouped into three macro categories: **Depackaging, Recovery, Production.**

Tiger DePack's main product, the HS 10 UNIT was, up to last year, an extremely high-performance individual machine.

Its excellent results have led to widening of the product range to include machines with increasingly specific features aimed at **Depackaging, Recovery and Production.**



## DEPACKAGING

- REFUSE -



ORGANIC FRACTION OF URBAN SOLID WASTE  
FROM DIFFERENTIATED WASTE DISPOSAL  
OUT-OF-DATE FOOD

## RECOVERY

- WASTE MATERIALS -



DRY WASTE FROM PAPER MILL  
PULP PLANTS

## PRODUCTION

- RAW MATERIALS | PROCESSED MATERIALS -



DETERGENTS | TIN FOOD  
ICE-CREAM | BEVERAGES  
PET FOOD



# DEPACKAGING

## OFMSW AND EXPIRED PRODUCTS

**THIS IS THE MAIN SECTOR IN WHICH TIGER DEPACK HAS GAINED MOST OF ITS EXPERIENCE!**

**Depackaging**, namely the need to recover packaging and its contents, obtaining clearly defined and reusable materials such as, for example, packaging for out-of-date foodstuffs, such as cartons, tetrapack, ferrous and non-ferrous metal milk.

The advantage for the customer is that of obtaining two equally reusable materials: organic waste and packaging, both of which can be introduced into a dedicated recovery cycle without, therefore, generating waste.

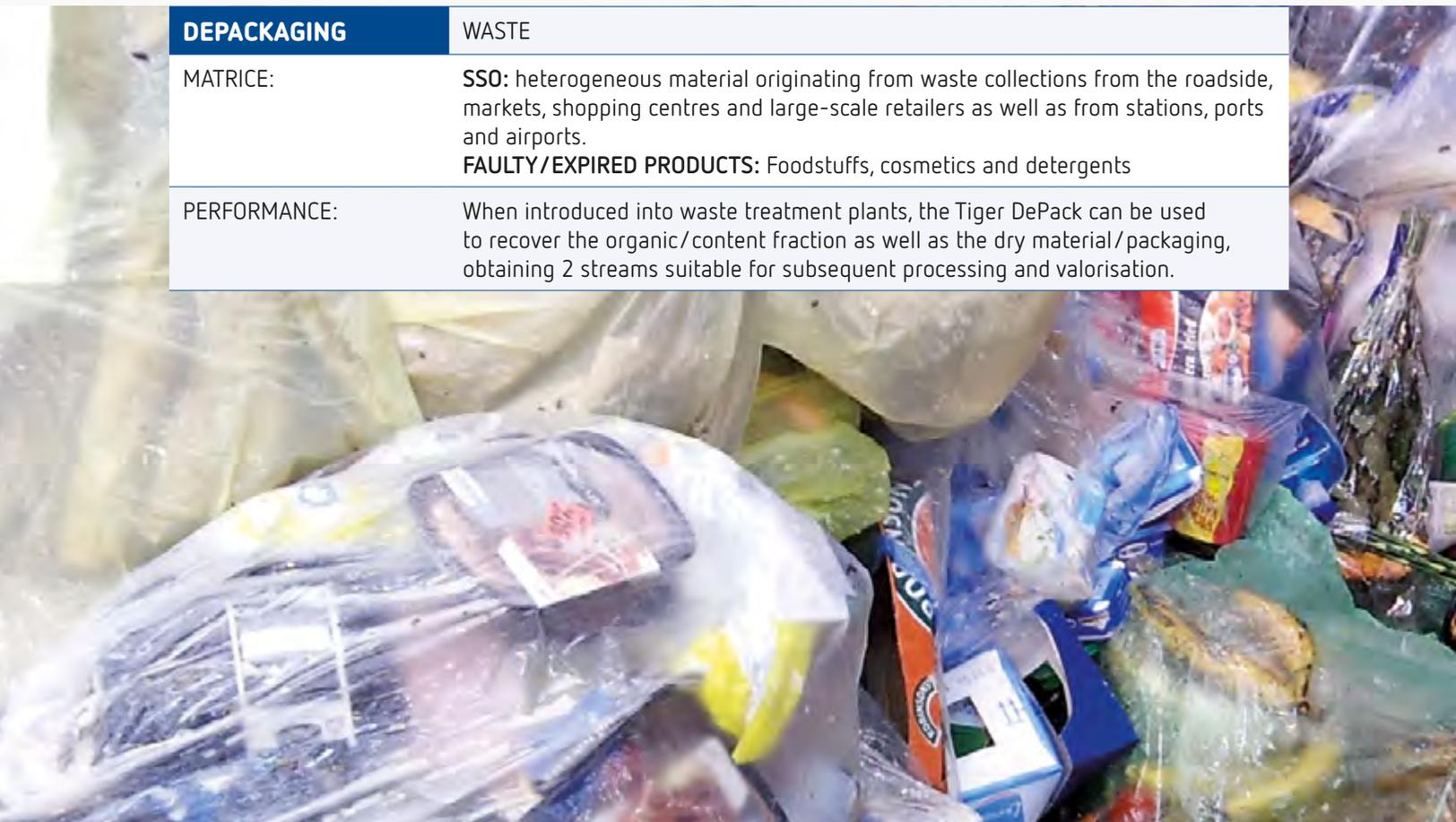
The two separate fractions are sent one (ORGANIC) to Anaerobic Digestion/ Composting processes. Whether they are WET or DRY process in the same way as direct composting only.

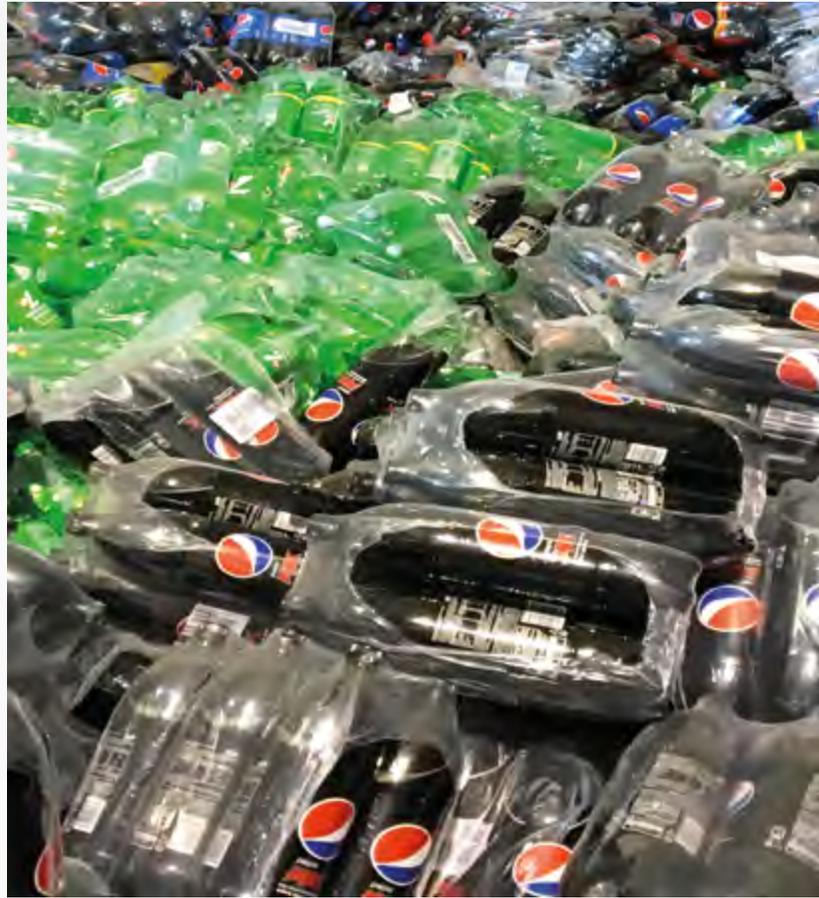
The separate packaging (FORSU-PACKAGING BAGS) has a very low weight and a quality suitable for subsequent development of the supply chain.

The units are made of resistant materials in environments with stressful conditions and the robust structure guarantees resistance to accidental impacts with the loading means.



DEPACKAGING	WASTE
MATRICE:	<b>SSO:</b> heterogeneous material originating from waste collections from the roadside, markets, shopping centres and large-scale retailers as well as from stations, ports and airports. <b>FAULTY/EXPIRED PRODUCTS:</b> Foodstuffs, cosmetics and detergents
PERFORMANCE:	When introduced into waste treatment plants, the Tiger DePack can be used to recover the organic/content fraction as well as the dry material/packaging, obtaining 2 streams suitable for subsequent processing and valorisation.





*Dry waste from paper mill / Pulp plants*



# RECOVERY

## WASTE TREATMENT

The second sector of application is **the recovery** of products originating from the disposal process.

When added to a preexisting waste disposal line, the Tiger DePack can recover ALL of the organic material present.

From the experience gained in the recovery plants, we have found that from a weight of 27% of plastics sent for disposal with the use of Tiger DePack only 7% is sent for disposal.

Our particular technology additionally ensures the homogenisation of the material, reducing its size to make it suitable for the following applications: from wet anaerobic digestion, to composting, to the recovery of the raw material.

Staying in the "Recovery" sector, the Tiger DePack PPS was created to employed in treating paper mill pulp, which is not a product but rather production waste from the process of paper making. The introduction of the Tiger DePack has also led to a considerable reduction in the amount of waste sent to disposal in this case, leading to 20% of pulp being recovered and reintroduced into the production cycle.

RECOVERY	WASTE
MATERIALS:	<b>Inorganic waste</b> from the pre-treatment of OFMSW and expired material <b>Pulp:</b> Waste from the paper-making process
PERFORMANCE:	Applied in processing the waste originating from waste treatment plants, Tiger DePack can effectively process a range of materials otherwise intended for disposal.

# PRODUCTION

## MANUFACTURING WASTE

The third sector for use is production.

Industrial manufacturing generates waste by way of quality control: such as distorted labels on packaging and test samples from product batches. By introducing the Tiger DePack into the production process, products can be broken down, and material recovered that would otherwise have been processing waste, allowing production waste to be eliminated at its source.

This machine is currently used in plants manufacturing pet food, ice cream and in companies that manufacture detergent.



PRODUCTION	MANUFACTURING ACTIVITY
MATERIALS:	All types of production waste in paper/ card, tetrapack, ferrous metals and otherwise, plastics.
PERFORMANCE:	In an integrated production line, the Tiger DePack separates content from its packaging with an overall recovery approaching 100%.



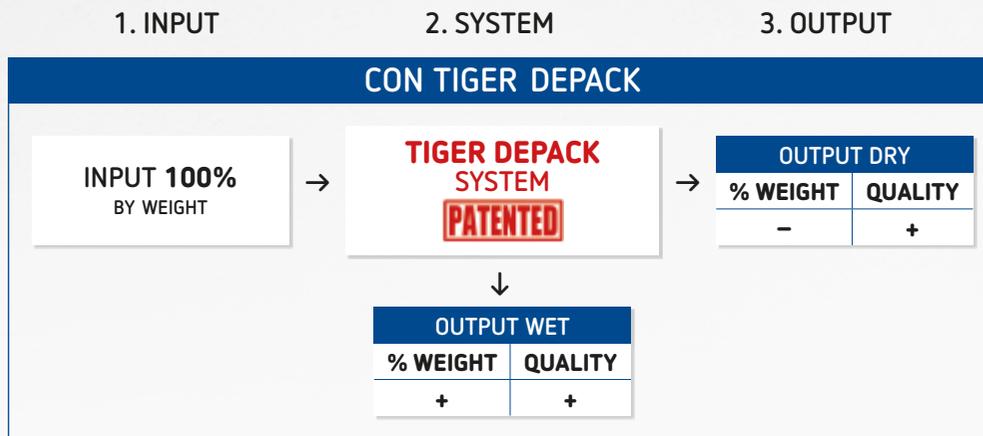
Detergents | tin food  
Ice-cream | beverages - Pet food



# HOW IT WORKS

TIGER DEPACK'S TECHNOLOGY IS TRADEMARKED!

Designed to fulfil the technological void left by the preexisting technologies in terms of thickening, shredding and sorting, and horizontal separation, Tiger DePack followed a design process focussed on 3 points:



**Vertical separation** is at the heart of the Tiger DePack system's technology. This results in the processing of heterogeneous material intended for disposal and the improvement in the handling of already processed material.

The technological solution that has allowed the feed hopper to be installed next to the separation assembly is the **feeding system**, both of which are managed by a single **management software** that governs the augers' speed, based on the settings provided and by the characteristics of the material being loaded.

Thanks to its extremely compact design, the Tiger DePack is an **All-in-One** solution insofar as all the components it requires to operate are enclosed within its shell.

A power supply and the addition of filtration are all that is needed in order to begin: **Plug & Play**.

The development of **components and materials** such as Hardox and Stainless Steel has allowed spare parts to be replaced more than twice as much as competing products.

Thanks to these features, Tiger DePack is the most compact and reliable machine on the market with the lowest operating costs over three shifts (€ per tonne processed).

## OUTPUT STREAM CHARACTERISTICS:

- With a near 100% recovery of the wet material, value can often be added to the dry fraction or redirected to the responsible chain.
- The vertical separation system ensures the recovery of the highest quality material possible, maximising the influx of wet material and minimising the frictional effects of the material coming into contact with the machinery.



\* Output dry fraction  
/ Plastics - cans - paper  
/ Output wet fraction



# TIGER DEPACK RELIABILITY AND EFFICIENCY

## All of our technology in a single machine

- /// Machines for Manual or automatic processing cycles
- /// Machines suitable for indoor or outdoor processing
- /// Machines which can be introduced to the primary production cycle without the need to install the relevant framework
- /// Production capacity over a 24/7 processing cycle
- /// Low maintenance
- /// Remote control system available
- /// Oversized electrical motor in relation to the power required
- /// Automated end-of-day cleaning cycle

# MORE THAN 80 TIGER DEPACK IN THE WORLD

- USA
- ENGLAND
- FRANCE
- ITALY
- FINLAND
- AUSTRALIA
- CANADA
- POLAND
- HOLLAND
- NORWAY
- LITHUANIA



# PRODUCT LINE

The Tiger DePack brand encompasses an entire product range, each distinguishable by its features, size and productivity.

There are 3 main products:

- /// The **Tiger HS 10 UNIT**, known as the HS640 prior to 2017, is the machine that started everything.
- /// The **Tiger HS 20 UNIT** was created to handle increased processing capacities and sizes a little larger than the Tiger HS 10.
- /// The **Tiger HS 5 UNIT**: the main feature of this product is its extremely compact size for specific installations.

Within these 3 main types of machine, which can be distinguished primarily by their size and productivity, a series of technologies have been developed: the first known as **Paper Pulp Solutions (PPS)** which can be applied to the Tiger HS 20 PPS and HS 5 PPS specifically for the treatment of paper mill pulp, the second called **Override Cleaning (OSC)** applicable to Tiger HS 20 OSC and HS 5 OSC machines specific for the treatment of oversize.

\* Tiger DePack HS 20 UNIT



\* Tiger DePack HS 5 GROUP

Additional assemblies are encompassed in the **Low Profile System** applicable to the Tiger HS 10 LP and HS 5 LP machines. These technological features are aimed at reducing the machine's loading height.

In order to meet market needs, a separate material pressing unit from the screw-tank and hopper can also be purchased. The separate pressing unit is represented by the HS 10 GROUP and HS 5 GROUP.

The goal for the next few years is to create additional technological solutions under the Tiger DePack brand to meet the continual evolution of the environmental and manufacturing treatment sectors which are becoming increasingly focussed and which will require dedicated machinery.



*\* Tiger DePack HS 10 UNIT*

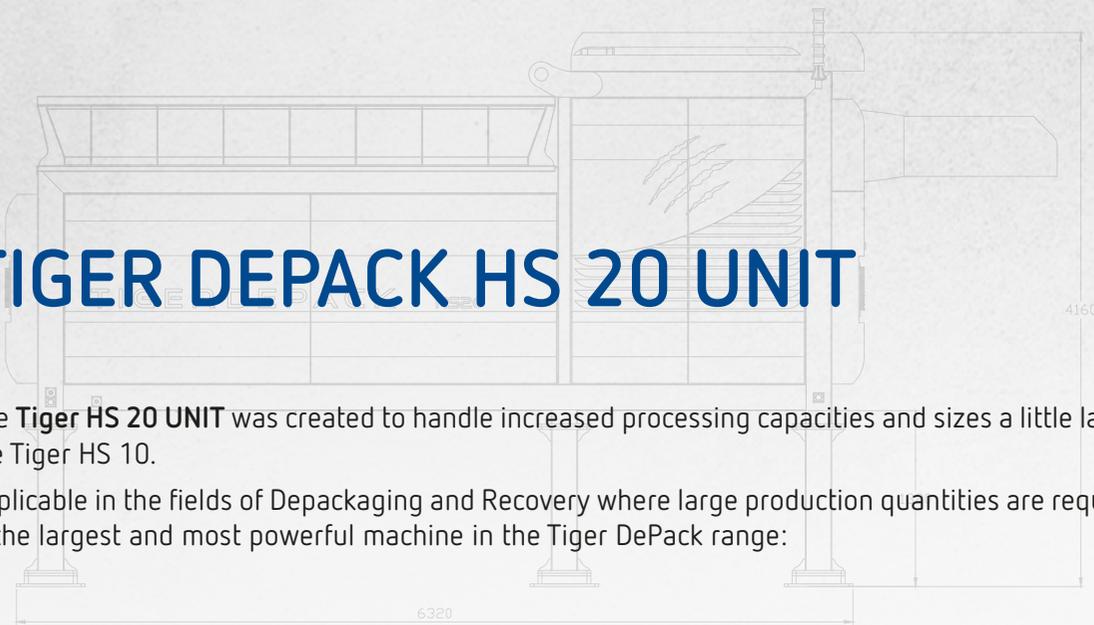


*\* Tiger DePack HS 10 LP*

# TIGER DEPACK HS 20 UNIT

The **Tiger HS 20 UNIT** was created to handle increased processing capacities and sizes a little larger than the Tiger HS 10.

Applicable in the fields of Depackaging and Recovery where large production quantities are required. This is the largest and most powerful machine in the Tiger DePack range:





TIGER HS 20 UNIT	STANDARD HOPPER	15-25 t/h
HOPPER	Standard hopper AISI 304	5,4 m <sup>3</sup>
LEGS	Standard legs	1.200 mm
SEPARATION	Basket in Iron STEEL S700, Shaft, Paddles, Bearings	
PLASTIC EXTRACTION	Dry fraction extractor screw	
ENGINES	ABB engine for the shaft	75 kW
	Engine with gearmotor for the feeding hopper	11 kW
	engine with gearmotor for the extraction screw	5,5 kW
LIQUIDS	Double water input line: process water line and washing line	
	Solenoid valve for the regulation of the incoming water flow	
	Liter counter	
ELECTRICAL AND SOFTWARE	Control panel with touchscreen	
	Software	
	Soft starter	75kW
	Frequency Converter	11 kW
	Electric cabinet	
	Rotation sensor for rotor	



# TIGER DEPACK HS 20 PPS

## PAPER PULP SOLUTION

The technological evolution of the Tiger HS 20 UNIT, the **Tiger HS 20 PPS**, is the specific version designed to meet the processing requirements of a paper-making pulp.

The ease with which it can be added and connected to an already underway productive cycle, both indoors or outdoors as a result of its compact form factor (it takes up only 21 m<sup>2</sup>), makes the Tiger HS 20 - PPS the solution to the needs of any paper mill.

A single machine with a selection system which reduces the material previously sent to landfill or incinerated by up to 70% in just one pass.

The recovered material is made up of water, which can be reused in the production cycle, and as much as 20% pulp or paper fibre. This material was previously disposed of together with the pulp waste and therefore represented an additional financial loss for paper mills.

The Tiger DePack HS 20 Paper Pulp Solution's extremely low running costs and 24 Hr operating capacity make it the most efficient and effective tool to introduce to the paper production cycle.

### TECHNICAL DATA

Power installed	85 kW
Average hourly electricity consumption	70 kW/h
Weight	12 t
Occupied surface area of	21 m <sup>2</sup>



## PAPER MILL PULP INPUT

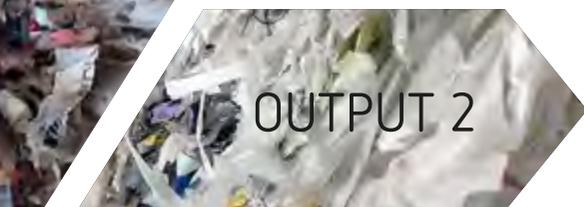




OUTPUT 1

70%

OF CELLULOSE FRACTION  
RETURNED TO PROCESS



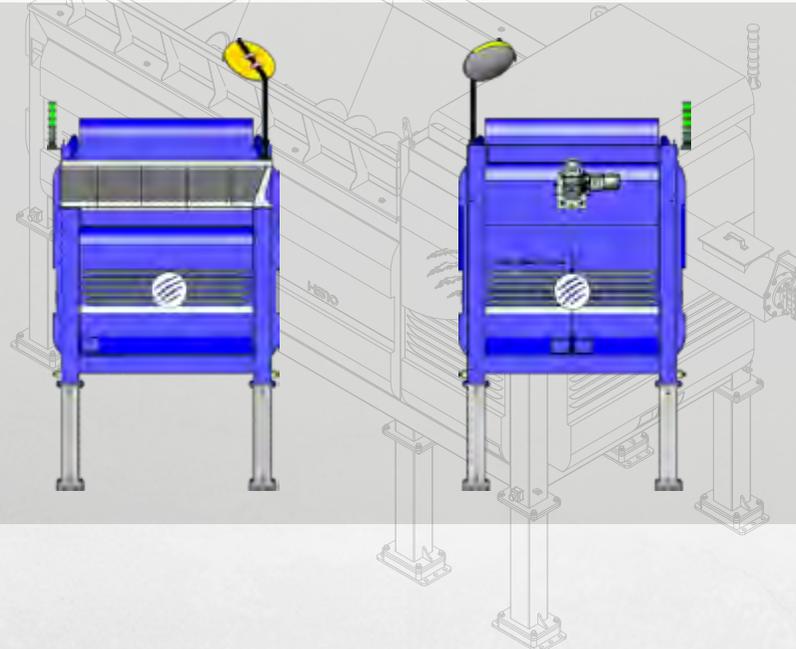
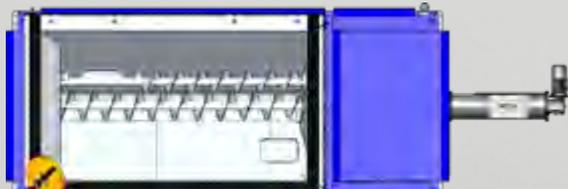
OUTPUT 2

30%

OF SEPARATE  
NON-CELLULOSE FRACTION

# TIGER DEPACK HS 10 UNIT

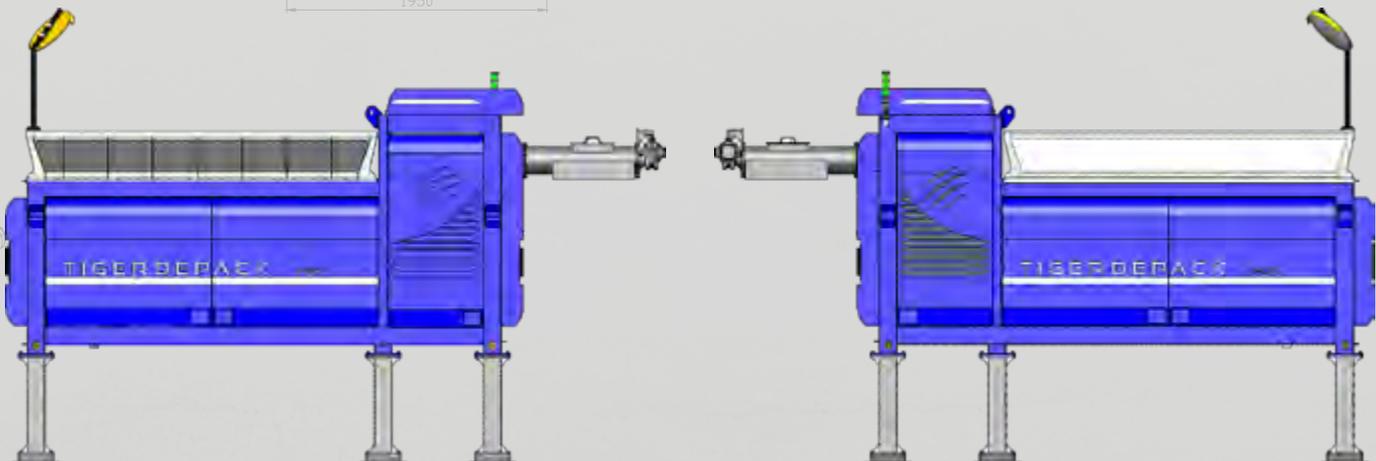
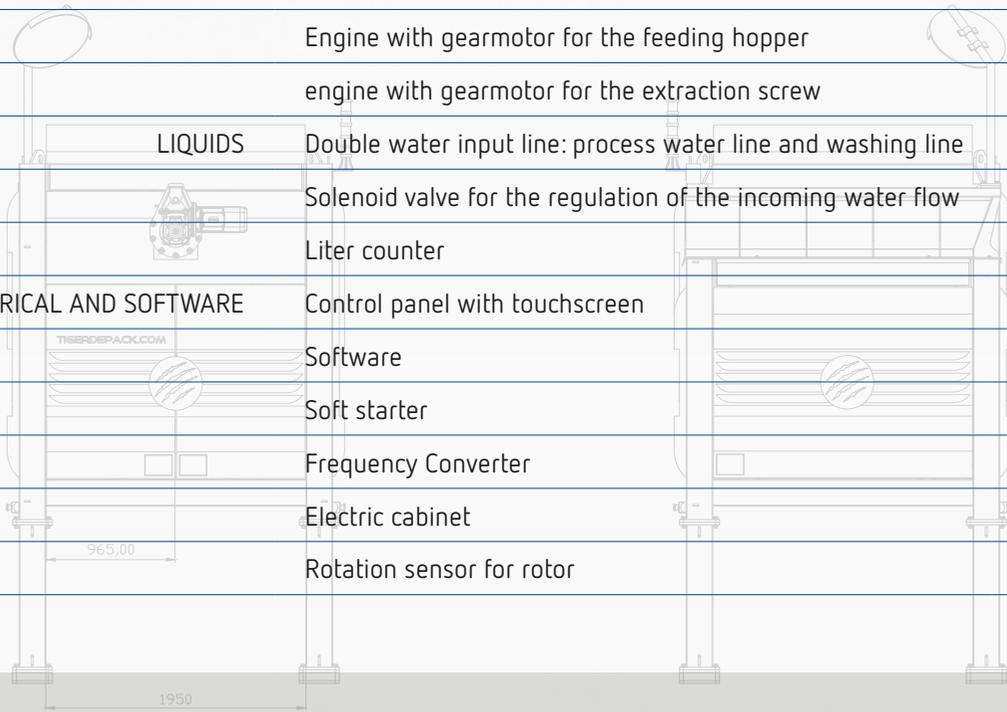
The **Tiger HS 10** is Tiger DePack's spearhead product. Created as the Tiger HS  
It is the base machine which is suitable for meeting a variety of requirements as a result of its size and productivity





## TECHNICAL DATA

TIGER HS 10 UNIT	STANDARD HOPPER	<input type="checkbox"/> <input type="checkbox"/>	7-18 t/h
HOPPER	Standard hopper AISI 304	1855,00	5,4 m <sup>3</sup>
LEGS	Standard legs		1.200 mm
SEPARATION	Basket in STEEL S700, Shaft, Paddles, Bearings		
PLASTIC EXTRACTION	Dry fraction extractor screw		
ENGINES	ABB engine for the shaft		55 kW
	Engine with gearmotor for the feeding hopper		7,5 kW
	engine with gearmotor for the extraction screw		2.2 kW
LIQUIDS	Double water input line: process water line and washing line		
	Solenoid valve for the regulation of the incoming water flow		
	Liter counter		
ELECTRICAL AND SOFTWARE	Control panel with touchscreen		
	Software		
	Soft starter		55 kW
	Frequency Converter		7,5 kW
	Electric cabinet		
	Rotation sensor for rotor		



# TIGER DEPACK HS 10 LP

The **Tiger HS 10 LP** is the version of the Tiger HS 10 designed featuring Low Profile technology.

Low Profile Technology makes it easier for the machine to be loaded at lower heights, so it can therefore be installed in fields with specific requirements. Its main field of application is Production where its installation in already operating manufacturing systems may require specific structural loading characteristics.



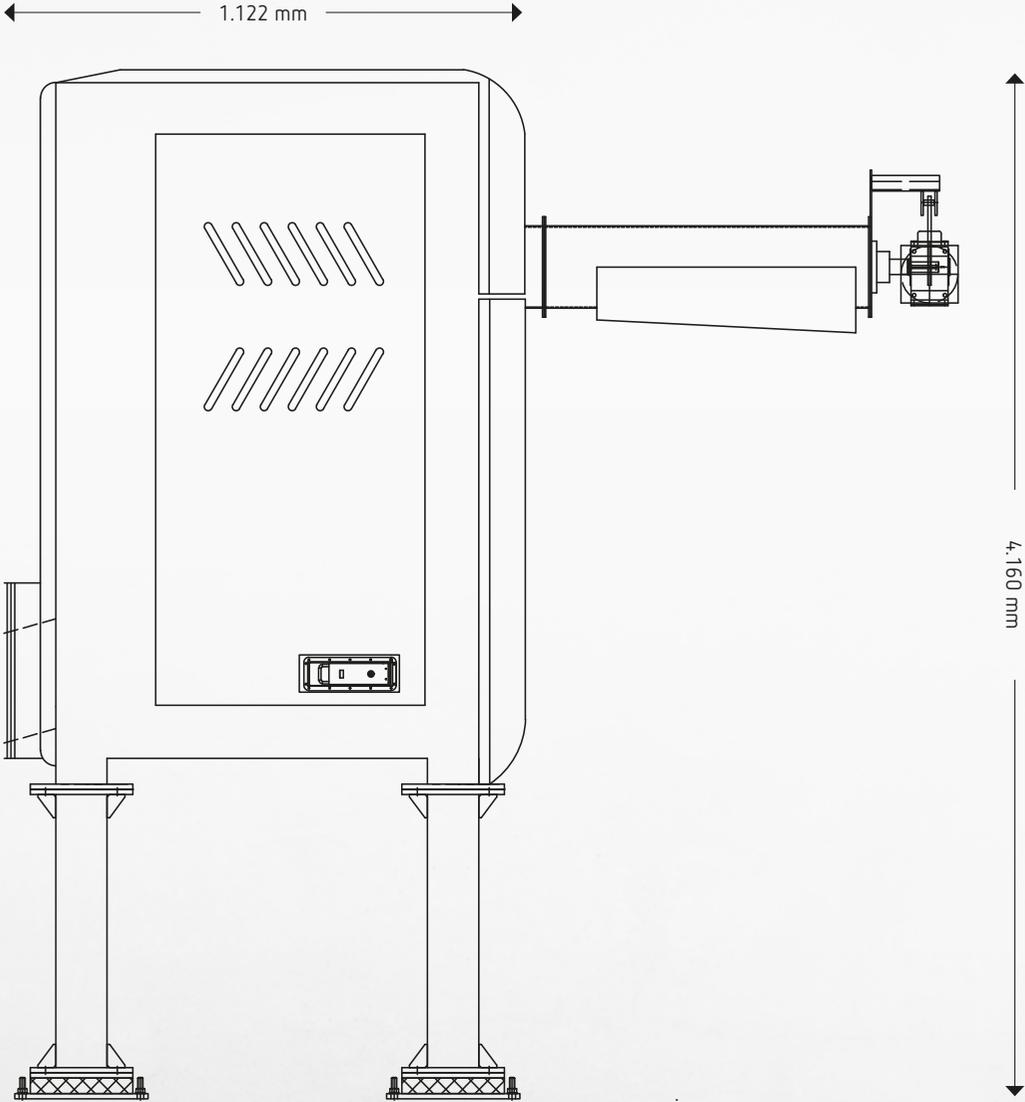
## TECHNICAL DATA

TIGER HS 10 LP	STANDARD HOPPER	7-18 t/h
HOPPER	Standard hopper AISI 304	Standard: 1 m <sup>3</sup> - Extension till: 4 m <sup>3</sup>
LEGS	Standard legs	1.200 mm
SEPARATION	Basket in STEEL S700, Shaft, Paddles, Bearings	
PLASTIC EXTRACTION	Dry fraction extractor screw	
ENGINES	ABB engine for the shaft	55 kW
	Engine with gearmotor for the feeding hopper	7,5 kW
	engine with gearmotor for the extraction screw	2.2 kW
LIQUIDS	Double water input line: process water line and washing line	
	Solenoid valve for the regulation of the incoming water flow	
	Liter counter	
ELECTRICAL AND SOFTWARE	Control panel with touchscreen	
	Software	
	Soft starter	55 kW
	Frequency Converter	7,5 kW
	Electric cabinet	
	Rotation sensor for rotor	



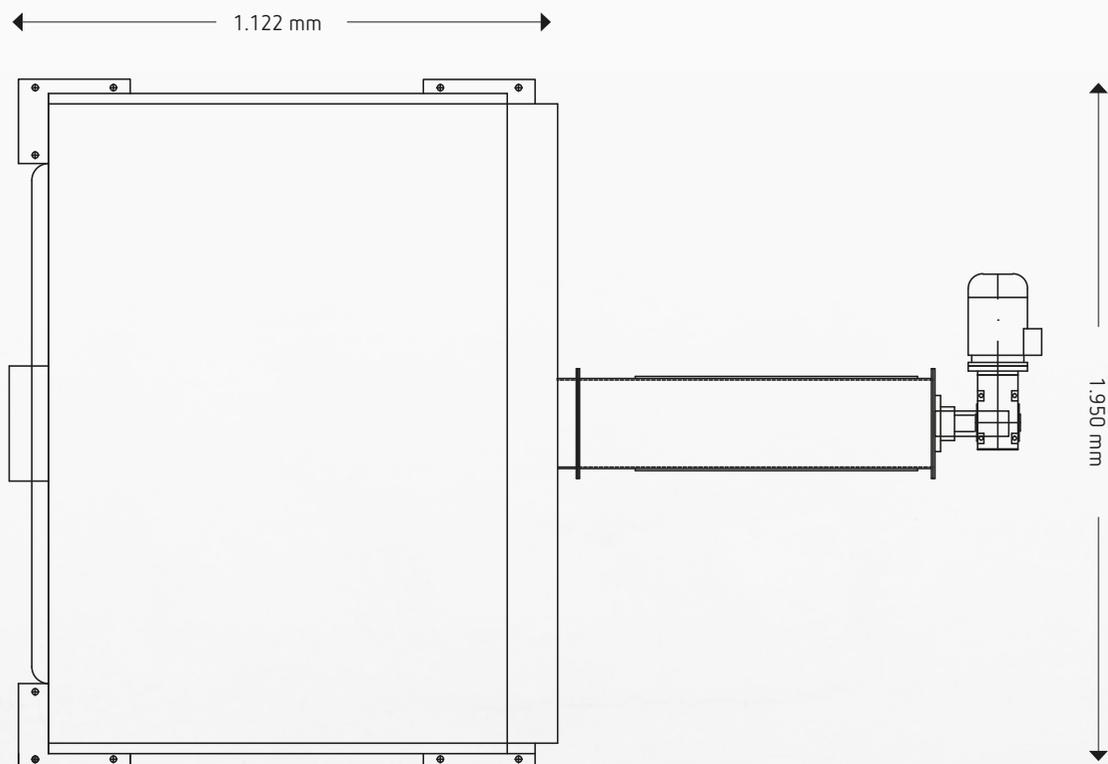
# TIGER DEPACK HS 10 GROUP

The **Tiger HS 10 GROUP** is the HS 10 UNIT's separation assembly.  
Designed to further facilitate its introduction during a plant's design phase.



## TECHNICAL DATA

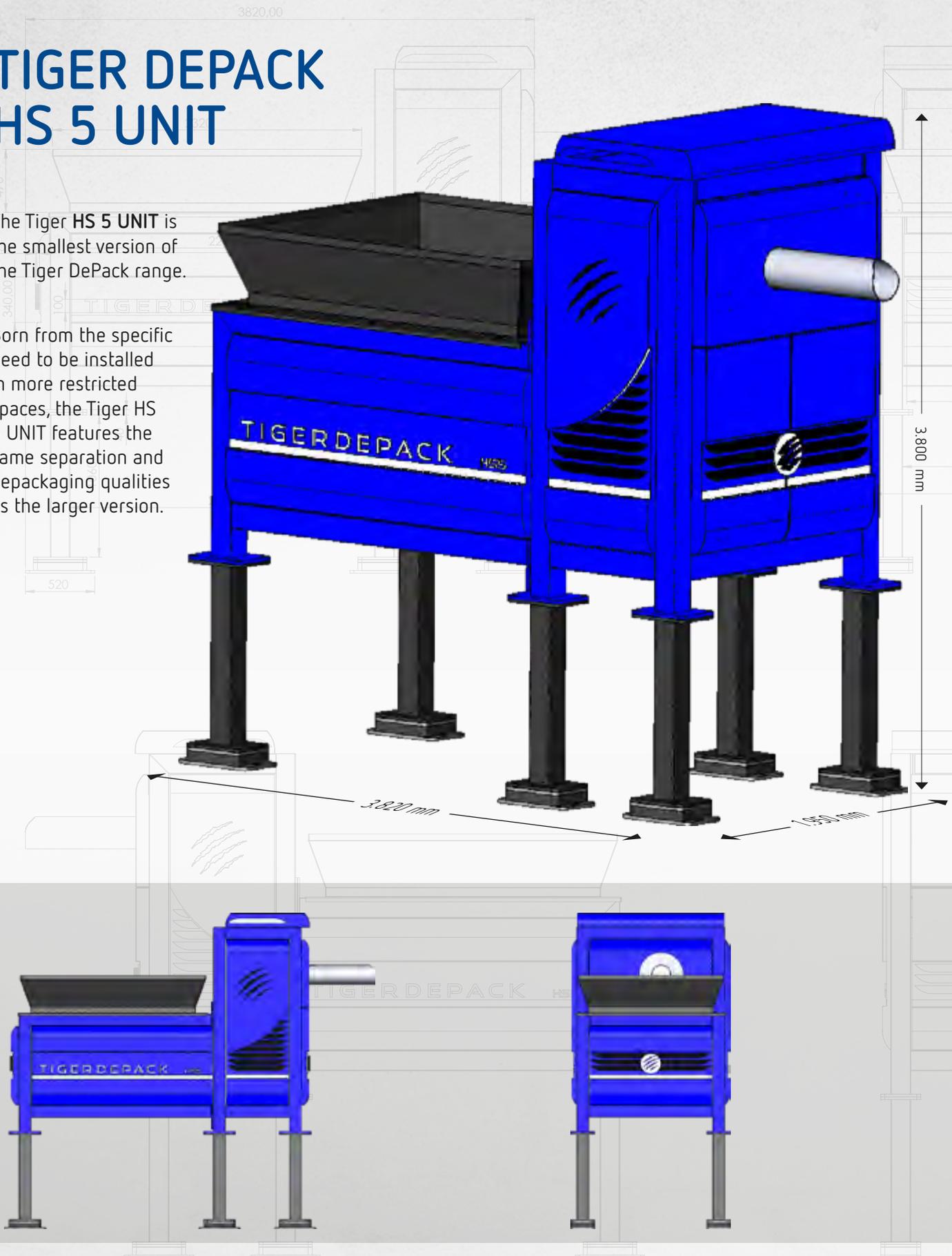
TIGER HS 10 GROUP	STANDARD HOPPER	7-18 t/h
LEGS	Standard legs	1.200 mm
SEPARATION	Basket in STEEL S700, Shaft, Paddles, Bearings	
PLASTIC EXTRACTION	Dry fraction extractor screw	
ENGINES	ABB engine for the shaft	55 kW
	Engine with gearmotor for the feeding hopper	7,5 kW
	engine with gearmotor for the extraction screw	2.2 kW
LIQUIDS	Double water input line: process water line and washing line	
	Solenoid valve for the regulation of the incoming water flow	
	Liter counter	
ELECTRICAL AND SOFTWARE	Control panel with touchscreen	
	Software	
	Soft starter	55 kW
	Frequency Converter	7,5 kW
	Electric cabinet	
	Rotation sensor for rotor	



# TIGER DEPACK HS 5 UNIT

The Tiger HS 5 UNIT is the smallest version of the Tiger DePack range.

Born from the specific need to be installed in more restricted spaces, the Tiger HS 5 UNIT features the same separation and depackaging qualities as the larger version.



## TECHNICAL DATA

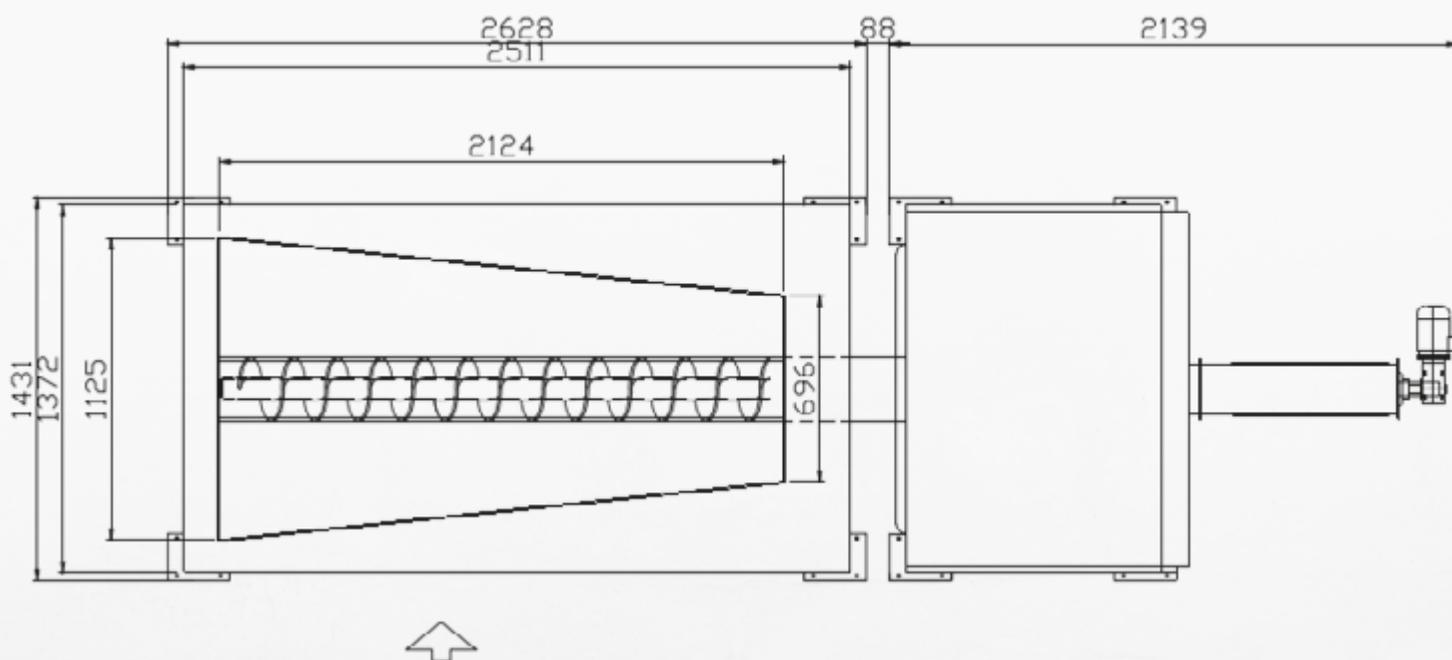
TIGER HS 5 UNIT	STANDARD HOPPER	3-7 t/h
HOPPER	Standard hopper AISI 304	1,5 m <sup>3</sup>
LEGS	Standard legs	700 mm
SEPARATION	Basket in STEEL S700, Shaft, Paddles, Bearings	
PLASTIC EXTRACTION	Dry fraction extractor screw	
ENGINES	ABB engine for the shaft	30 kW
	Engine with gearmotor for the feeding hopper	4 kW
	engine with gearmotor for the extraction screw	2.2 kW
LIQUIDS	Double water input line: process water line and washing line	
	Solenoid valve for the regulation of the incoming water flow	
	Liter counter	
ELECTRICAL AND SOFTWARE	Control panel with touchscreen	
	Software	
	Soft starter	30 kW
	Frequency Converter	4 kW
	Electric cabinet	
	Rotation sensor for rotor	





## TECHNICAL DATA

TIGER HS 5 LP	STANDARD HOPPER	3-7 t/h
HOPPER	Standard hopper AISI 304	Standard: 0,8 m <sup>3</sup> - Extension till: 2 m <sup>3</sup>
LEGS	Standard legs	700 mm
SEPARATION	Basket in STEEL S700, Shaft, Paddles, Bearings	
PLASTIC EXTRACTION	Dry fraction extractor screw	
ENGINES	ABB engine for the shaft	30 kW
	Engine with gearmotor for the feeding hopper	4 kW
	engine with gearmotor for the extraction screw	2.2 kW
LIQUIDS	Double water input line: process water line and washing line	
	Solenoid valve for the regulation of the incoming water flow	
	Liter counter	
ELECTRICAL AND SOFTWARE	Control panel with touchscreen	
	Software	
	Soft starter	30 kW
	Frequency Converter	4 kW
	Electric cabinet	
	Rotation sensor for rotor	



# TIGER DEPACK HS 5 GROUP

The **Tiger HS 5 GROUP** is the HS 5 UNIT's separation assembly.

Designed to further facilitate its introduction during a plant's design phase.



## TECHNICAL DATA

TIGER HS 5 GROUP	STANDARD HOPPER	3-7 t/h
LEGS	Standard legs	700 mm
SEPARATION	Basket in STEEL S700, Shaft, Paddles, Bearings	
PLASTIC EXTRACTION	Dry fraction extractor screw	
ENGINES	ABB engine for the shaft	30 kW
	engine with gearmotor for the extraction screw	2.2 kW
LIQUIDS	Double water input line: process water line and washing line	
	Solenoid valve for the regulation of the incoming water flow	
	Liter counter	
ELECTRICAL AND SOFTWARE	Control panel with touchscreen	
	Software	
	Soft starter	30 kW
	Electric cabinet	
	Rotation sensor for rotor	



# TIGER DEPACK REFERENCES









# SAFETY TECHNOLOGY

As industrial machines to be introduced into production cycles for the recovery of raw materials, waste treatment, and in manufacturing processes, Tiger DePack do not tolerate any compromise when it comes to the safety of their machines.

Passive and active systems control functionality, even from remote locations, which conform with the strictest laws on safety.

- /// Lockable and alarmed external hatches for accessing compartments with moving parts
- /// Open hatch alarms and automatic shut-down of moving parts
- /// Manual alarm buttons (Max. 4 per machine)
- /// Hatches with self-locking screws to internal compartments
- /// Emergency lighting signalling In Use, Error and Attention
- /// Integrated control board within the body of the machine in a protected and isolated position
- /// Integrated selector board
- /// Tiger DePack Emergency Circuit which can be integrated with the target system's emergency circuit
- /// Lifting hooks fitted for lifting/handling machinery
- /// Easy access to all parts of the machine for maintenance at any time
- /// Planned maintenance by specialist staff, worldwide



# THE TIGER DEPACK SYSTEM RELIABILITY AND EFFICIENCY

ALL OF OUR TECHNOLOGY IN A SINGLE MACHINE

- /// Machines for Manual or automatic processing cycles
- /// Machines suitable for indoor or outdoor processing
- /// Machines which can be introduced to the primary production cycle without the need to install the relevant framework
- /// Production capacity over a 24/7 processing cycle
- /// Low maintenance
- /// Remote control system available
- /// Oversized electrical motor in relation to the power required
- /// Automated end-of-day cleaning cycle



# TIGER DEPACK

## ACCESSORIES AND INNOVATIONS

The Tiger DePack's optional extras and accessories are available for all versions, offering increased adaptability to whatever manufacturing context they are installed in.

Elements whose function varies depending on the incoming material and which can also be modified at different times and phases after its purchase.

### Undersieve discharge systems

- Undersieve discharge tank
- Undersieve extraction pump
- Undersieve tank with auger
- Complete oversieve/undersieve fraction drainage system

### Optional extras for the loading hopper

- Additional bridge breaker with auger
- Hopper sprinkler system

### Integrated hardware/software and measuring accessories

- Profibus Module
- Loading cells

### Struts and wheels

- Mobile Pack (Wheels with axles and drawbar)
- Strut extension (up to 2000 mm)

### Door painting and lubrication

- Sliding doors
- Automatic lubrication device with timer
- Bodywork colour options

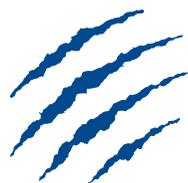


# WORLDWIDE SERVICE

The spearhead of the Tiger DePack System is the Worldwide Assistance Service it offers for its machines. The ability to provide our customers with warranties and planned assistance, as well as the possibility of remote monitoring, make the Tiger DePack an efficient and effective system.

A system that can guarantee the availability of spare parts and qualified staff capable of providing a rapid response to our customer's needs.





# TIGER DEPACK®

PACKAGING AND CONTENT RECOVERY SOLUTION

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