



# COMMERCIAL CATALOGUE



## WHO ARE WE?

Manzano-Flottweg specializes in the manufacture of machinery for olive oil extraction plants and stainless-steel tanks for the storage and settling of oils.

Our brand is recognized for quality in the manufacture of storage cellars, settling and oil selection. Our machines are synonymous with reliability and innovation in 15 countries. The company's history dates to 1918 for a reason. We are the oldest company among the suppliers of equipment to the olive sector.

Since January 2017, Manzano has been the exclusive representative of Flottweg for the application of its technology in the olive oil sector in Spain, Portugal, and northern Africa, having established agreements with Flottweg representatives in other countries around the world. Flottweg is a world-renowned separation manufacturer. Its head office and manufacturing point for 100% of its equipment is in the industrial heart of Germany in Bavaria.

We are a team of 65 young employees with a lot of experience. We carry out a determined effort in research and development, always aiming to achieve solutions that guarantee the maximum competitiveness, security, and flexibility of the products we manufacture. We offer to all our customers, because we mean that our work does not stop at sales, an efficient after-sales service, for start-up, problem solving or any other consultation we received.

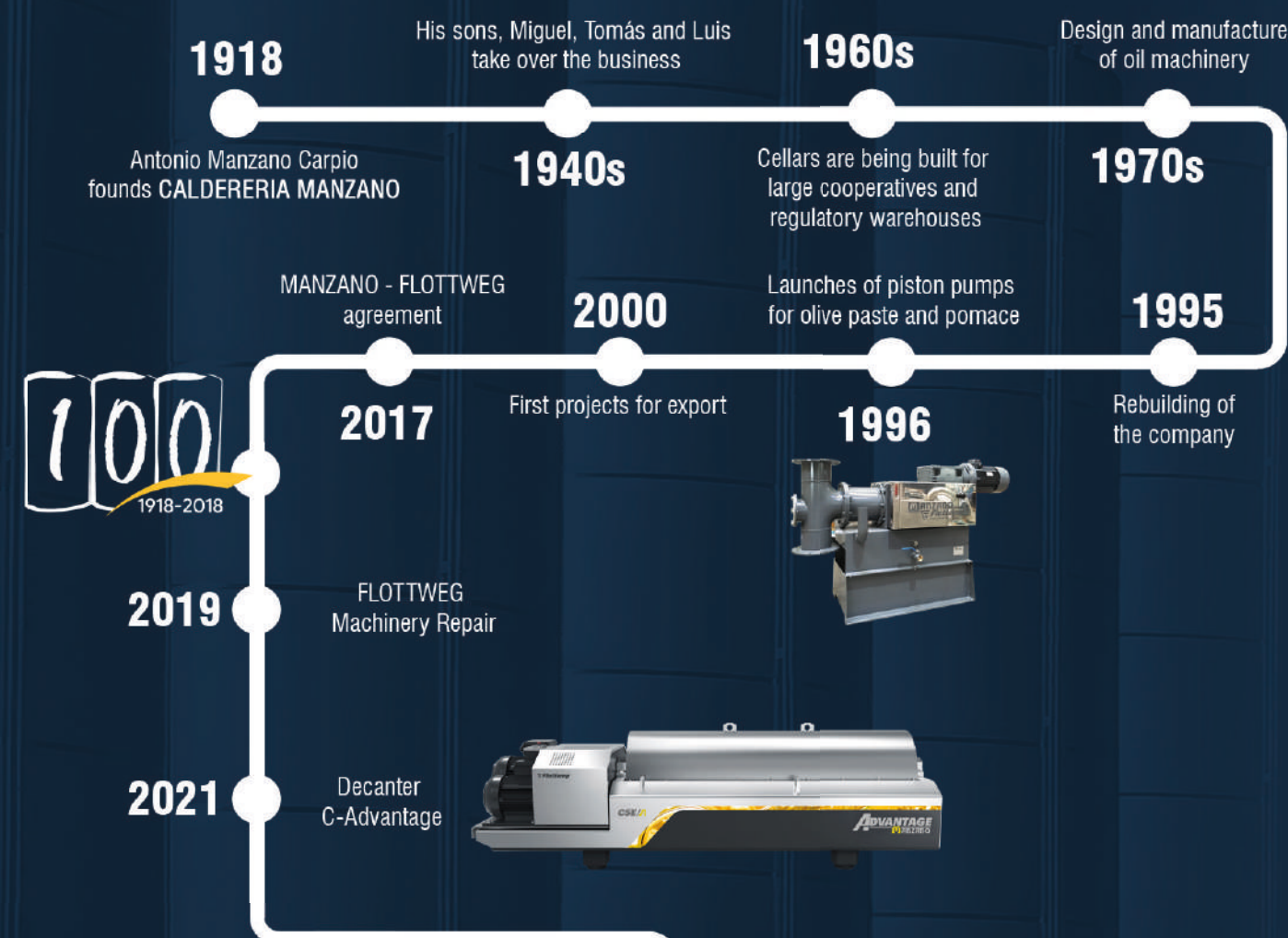
You will choose Manzano-Flottweg if you are looking for advice, range in range, best finishes, efficiency in production. You will receive service, flexible response, tranquillity and seriousness. We are looking for demanding customers who collaborate with us in the present and future.

### NORTH, SOUTH, EAST, AND WEST

Since we started designing and manufacturing olive growing machines, our equipment and vats have been sent either directly or by third parties to many of the olive oil producing countries.



## WHY CHOOSE US?



**Innovation, Investment, Illusion**

**I+I+I**



# MILLING



DOUBLE

## CRUSHER MILL MT SERIES

The crusher is a machine that takes active part in the fruit transformation and preparation for oil extraction. Energy consumption: at 3000 rpm, consumption ranges between 22.5 and 60 kw per unit, depending on the model.

	MT-30	MT-40	MT-50
Power	30 C.V. + 1 C.V.	40 C.V. + 1 C.V.	50 C.V. + 1 C.V.
Production	3000/4000 Kg/h	4000/5500 Kg/h	5000/7000 Kg/h

	MT-60/S	MT-75/S
Power	60 C.V. + 1 C.V.	75 C.V. + 1 C.V.
Production	6000/9000 Kg/h	8000/11000 Kg/h



SIMPLE

# PUMPING

## PISTON PUMP PTM FOR PASTE AND POMACE

Caldereria Manzano, S.A. piston pumps are an original design of the brand from 1996. More than 3000 units have been installed in 15 countries.

- ROBUST AND SIMPLE IN DESIGN.
- LOW MAINTENANCE COSTS.
- HIGH FLOW RATE
- COMPLIANCE WITH FOOD SAFETY REGULATIONS.



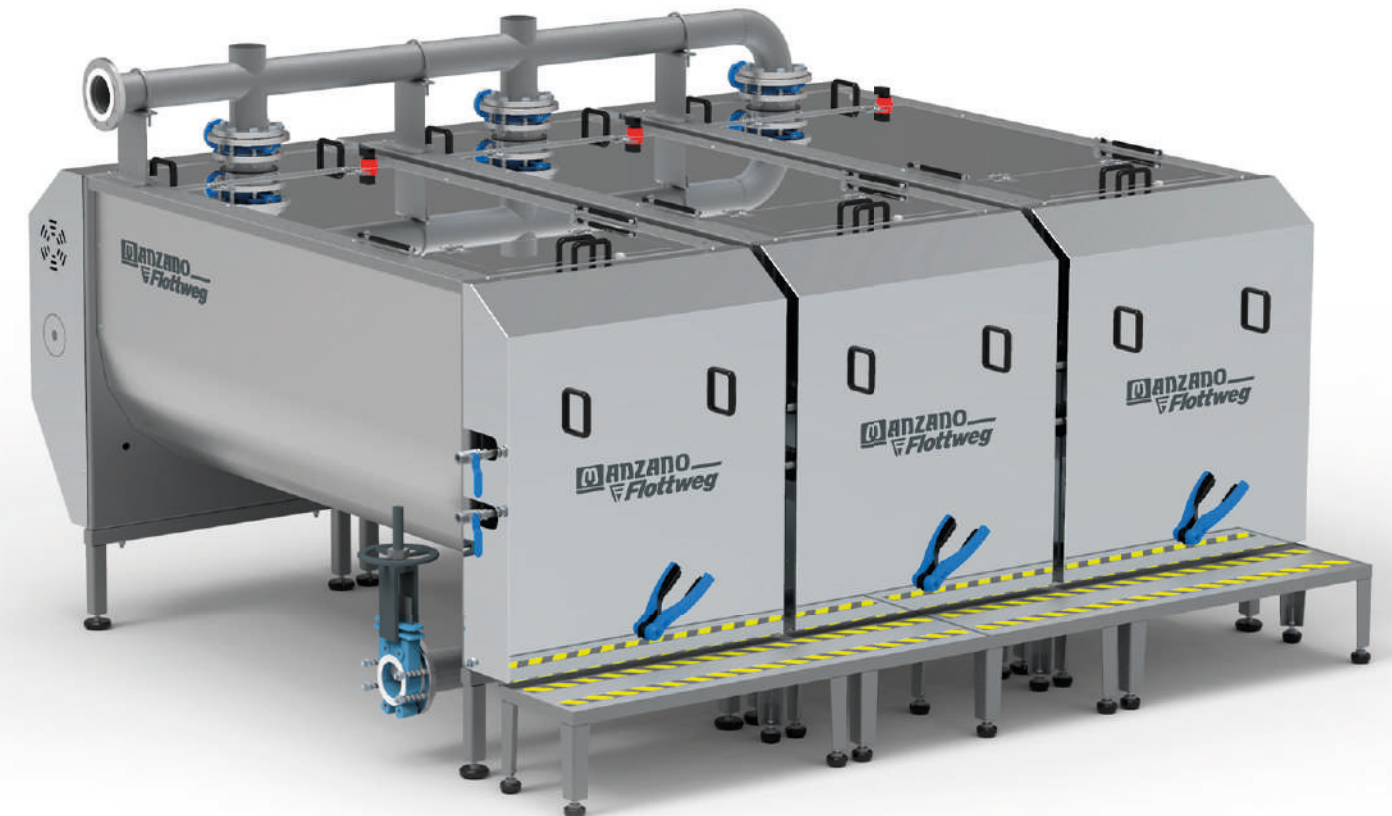
	PTM-100	PTM-300	PTM-600
Power	4 C.V.	10 C.V.	25 C.V.
Flow	6 m3/hour	17 m3/hour	25 m3/hour
Production	100 T/24h	300 T/24h	700 T/24h

	PTM-175/S	PTM-350/S	PTM-500/S
Power	10 C.V.	20 C.V.	25 C.V.
Flow	8 m3/hour	17 m3/hour	22 m3/hour
Production	150 T/24h	350 T/24h	500 T/24h

# BATCH THERMOMALAXERS

The process of batch extraction or maquila answers the need of these olive producers who want to be able to extract their own oil. This has been a growing trend for several decades when the continuous process had almost completely taken hold. The main difference is in malaxing. The necessity of separating the product into partitions of each customer makes it necessary small modulations that can temper the dough and wither the fat cells in a tight way during the treatment of other batches. At Manzano-Flottweg we design and install vertical and horizontal batch or maquila thermomalaxer in modules from 1000 to 1500 Kg.



HORIZONTAL TLH-1000



# THERMOMALAXER



## CONTINUOUS THERMOMALAXER

The thermomalaxer is a crucial step for optimal oil separation.

At CALDERERIA MANZANO, we add several decades of experience in the design and manufacture of thermomalaxer, offering thanks to its modular design one of the widest ranges on the market as capacity and high flexibility in the arrangement of modules. We manufacture thermomalaxer for continuous or maquila lines from 1000 kg to 50.000 kg.

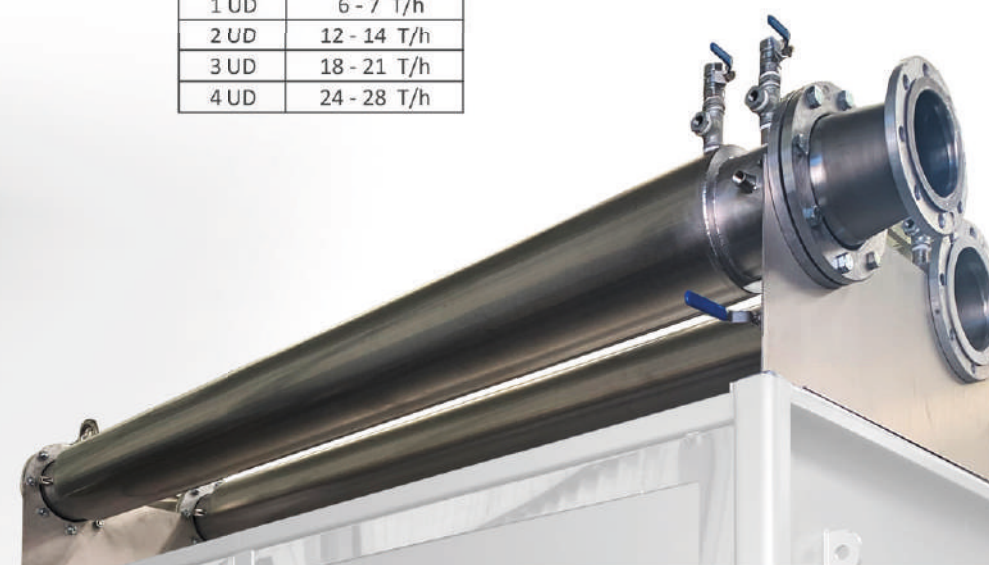
THERMOMALAXERS			
Capacity per module	3500 kg	5500 kg	8500 kg
Installed power per module	5,5 Kw (7,5 CV)	7,5 Kw (10 CV)	7,5 Kw (10 CV)
Circulation System	Overflow / Automatic		

## THERMOACCELERATOR

The malaxing temperature is a crucial point in the process, a producer's decision, which seeks its ideal relationship between the quality and quantity of the oil obtained. In any case, a minimum temperature is required for the malaxing to be effective, so a very cold fruit can take so long to reach that the remaining malaxing is insufficient to obtain an adequate yield..

In order to achieve the appropriate temperature (higher or lower) in the shortest possible time, we have designed this equipment that is installed before the thermomalaxer.

THERMOACCELERATOR	
1 UD	6 - 7 T/h
2 UD	12 - 14 T/h
3 UD	18 - 21 T/h
4 UD	24 - 28 T/h







Flottweg presents the series C - Advantage Manzano. The recognized reliability and efficiency of the brand, with excellent results, in a series specially designed for paste and pomace in two phases. A simple line that combines quality and price. Two models for medium-sized oil mills with a stable and continuous process where regulation is not the first concern of the operator. The results and the life of the machine are.



	Serie C3E/A	Serie C4E/A	Serie C5E/A
Rated capacity (oil - pomace)	55 - 70 Tm/24 h	120 - 140 Tm/24 h	200 - 250 Tm/24 h
Weight (kg)	1.765	2.760	5.060
Long/Wide/High (mm)	2.980/940/890	3.520/1.140/1.030	4.100/1.520/1.210



	Serie Z3E	Serie Z4E	Serie Z5E
Rated capacity (oil - pomace)	40 - 60 Tm/24 h	100 - 120 Tm/24 h	180 - 200 Tm/24 h
Weight (kg)	1.850	3.000	6.200
Long/Wide/High (mm)	2.645/1.180/890	3.740/1.000/1.200	4.500/1.600/1.150

## DECANTER FLOTTWEG

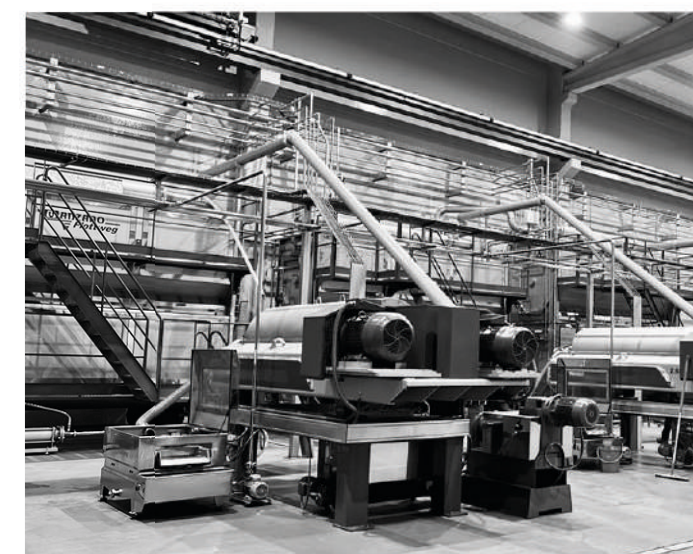
Flottweg is one of the leading suppliers of solid - liquid separation technology worldwide. Based in Vilsbiburg, in the industrial heart of Germany, it has a team of more than 850 factory employees and 200 others in various sales offices around the world.

**The Decanter FLOTTWEG is, without a doubt, one of the best machines on the market.**



The Z series has the most advanced technology design on the market. Technical innovations such as the SIMP-DRIVE® that make it easy to automatically adjust the differential speed of the worm screw according to the load, and technical details that facilitate its maintenance and operation over its long service life. A series for separation into two or three phases according to the needs of each client.

If there is one detail that distinguishes the Z series from any other brand, it is the IMPELLER. The IMPELLER or adjustable rotor allows the adjustment of the oil output at full speed of the machine. Together, SIMP-DRIVE and IMPELLER offer you a complete setting with second setting manually or even integrated into your automation system.



Serie Z6E/A	Serie Z8E/A
240 - 500 Tm/24 h	600 - 1000 Tm/24 h
9.750/9.850	14.140
5.147/1.705/1.500	6.440/2.000/1.480

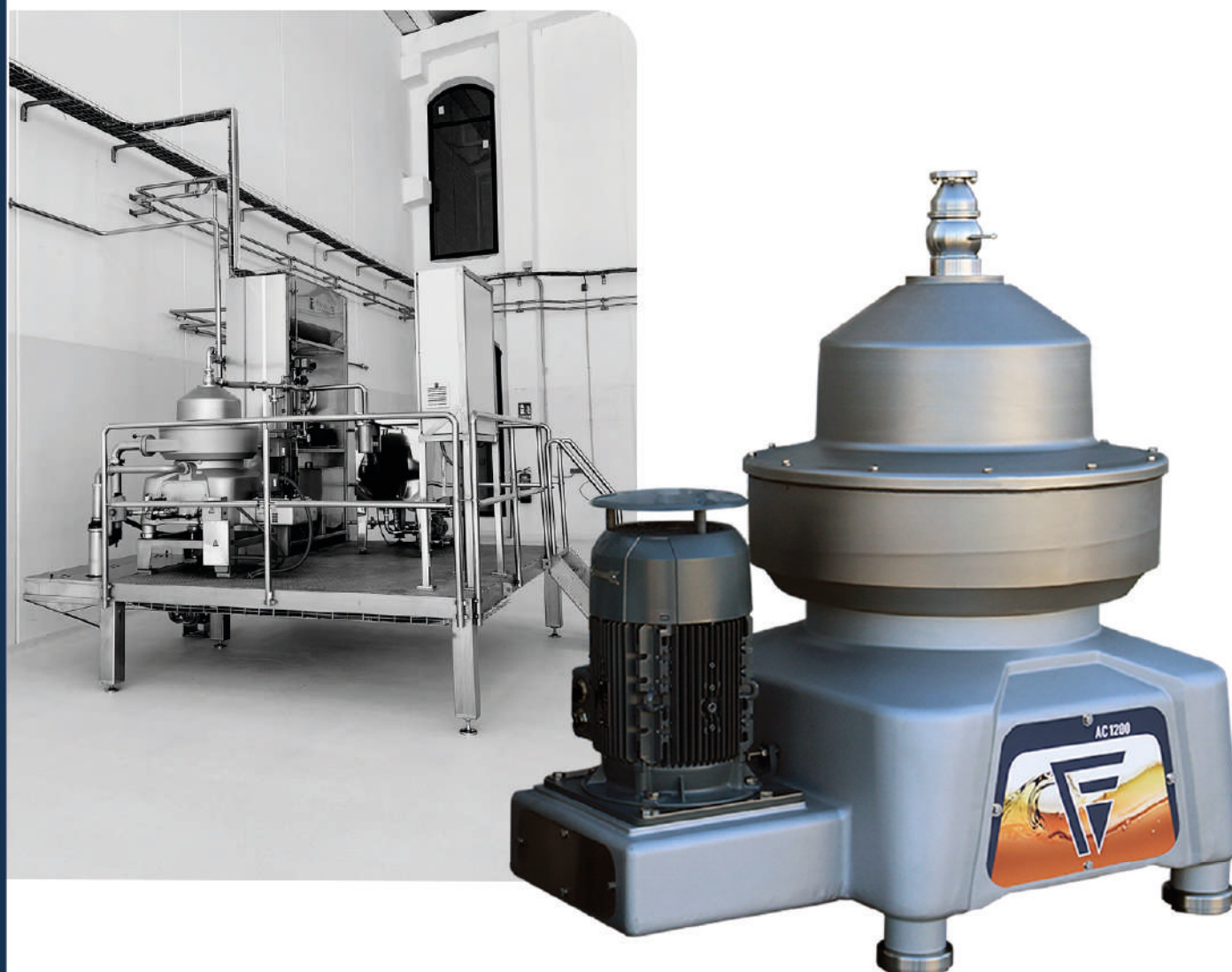


# VERTICAL SEPARATION

## FLOTTWEG DISC STACK CENTRIFUGE

FLOTWEG DISC STACK CENTRIFUGE is a centrifuge decanter that operates at a higher speed per minute than the FLOTTWEG DECANter, what enables the separation of the finest solids and liquids with different densities. This separation is critical, since remaining solids and water may affect oil quality.

The Flottweg stack centrifuge is also equipped with the patented SIMP-DRIVE technology.



	AC-1200-430 FO	AC-1510-430 FO	AC-1700-430 FO	AC-2000-430 FO
Power (kw)	7,5	15	18,5	30
Capacity(L/hour)	Up to 1.100	Up to 2.200	Up to 3.500	Up to 4.500

# AUXILIARY EQUIPMENT

## VIBRATING SCREEN

MANZANO Vibrating Screen for liquids incorporates a vibrating sieve that separates suspended solids.

	VT1452F-15	VT2502F-35	VT2502F-50
Capacity	145 litres	250 litres	250 litres
Flow	1500 l/h	3500 l/h	5000 l/h
Process	2 Phases	2 Phases	2 Phases

	VT2503F-15-50	VT2503F-35-50	VT2503F-50-100
Capacity	250 litres	250 litres	250 litres
Flow	1500 l/h + 5000 l/h	3500 l/h + 5000 l/h	5000 l/h + 10000 l/h
Process	3 Phases	3 Phases	3 Phases



## POMACE EVACUATOR

Replacing the old pomace receiving receptacles, CALDERERIA MANZANO pomace evacuator is a stainless steel chute that incorporates a 1 C.V. injector to enable an easy discharge into the piston pump.

	EO-350	EO-800
Power	1 C.V.	1 C.V.
Capacity	350 litres	800 litres



## DECANTER TANK FOR THE DISC STACK CENTRIFUGE

The oil fed from the disc stack centrifuge is discharged into a double wall decanter tank completely manufactured in stainless steel by CALDERERIA MANZANO.

	DAC275 - 15	DAC275 - 35	DAC500 - 50
Capacity	275 litres	275 litres	500 litres
Oil pump	1500 l/h	3500 l/h	5000 l/h

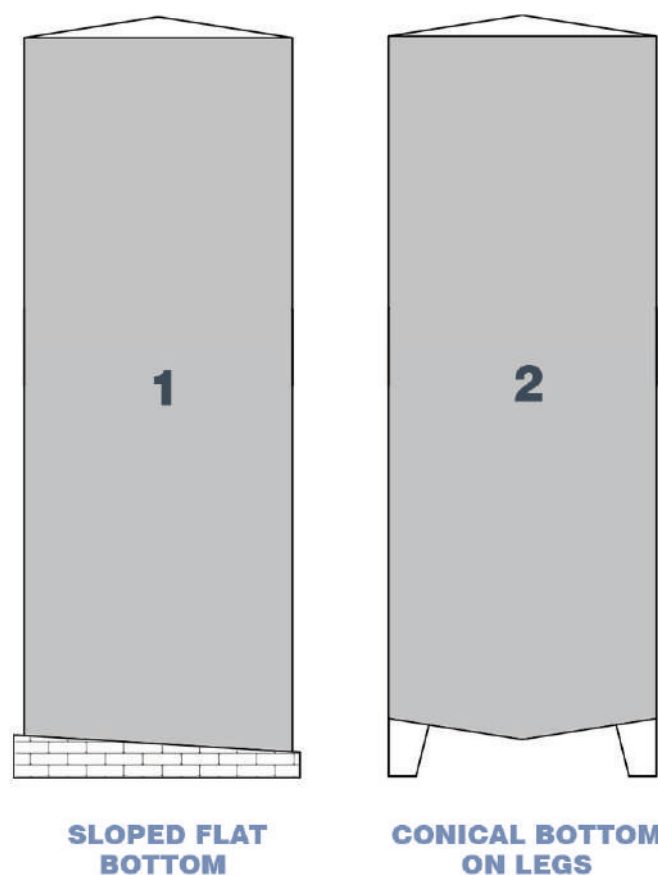




# STORAGE

The tanks are completely manufactured in stainless steel and specifically designed for the olive oil industry.

The manufacturing process takes place in our factory in Villafranca, where, since 2014, more than 300 tanks have been delivered to a dozen countries yearly. It was then when the company started new improved systems, leading to an automated and precise assembly process, with high quality welding and a wider range of diameter to cater for our customer's needs.



## AUXILIARY EQUIPMENT

### STOREHOUSES AUXILIARY EQUIPMENT

The best of the storehouses requires a cleaning and maintenance system that prevents stored oil and equipment from damage over time. We offer a mobile cleaning system with high-pressure water or water sprinkler and a water pumping system to meet your needs.



#### CLEANING MACHINE

- Water projector and accessories
- Cleaning pipeline with diffuser ball



#### PURGES COLLECTOR

#### ACCESSORIES

Inertization system, decanting elbows for emptying, precise level indicators in stainless steel without adhesive or paint, sample taking valves from any point, and other accessories that will customize tank to meet the customer's needs.

# HIGH CAPACITY



### HIGH CAPACITY TANKS

Nowadays, oil mills require large capacity storage and top quality. We manufacture tanks of up to 170 T with robot welding meeting the Food Safety Regulations, as well as all the accessories, material and finish featured by lower capacity tanks.

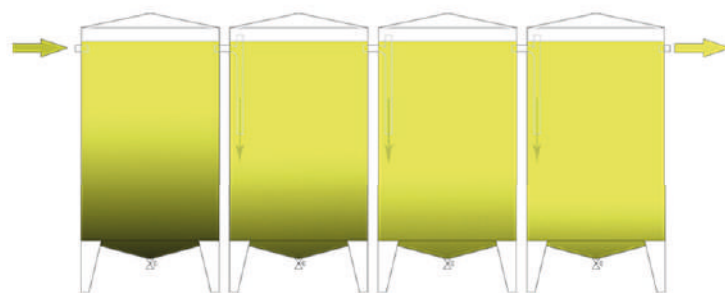
Choose high capacity tanks that suit your needs.



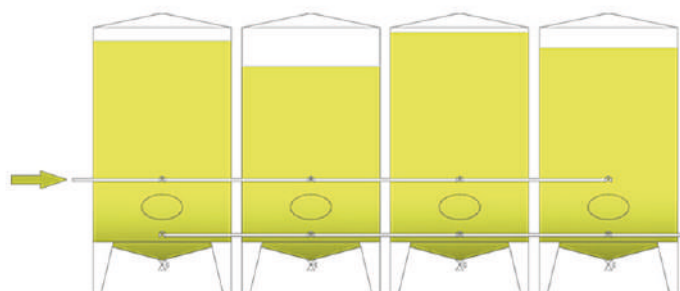
# DECANTING

## DÉCANTATION AND SELECTION TANKS

The definition, design and manufacture of the tanks for decanting and polishing processes prior to the storage are crucial. Choosing a proper size, cone angle, a static or dynamic settling and the design of their connection will allow the olive oil manufacturer to properly separate the different qualities and varieties, avoiding then heterogeneous batches resulting in a decrease in value of the product.



**DYNAMIC DECANTATION**



**STATIC DECANTACION**

# AUTOMATION



**OLIVE UP! INDUSTRIA 4.0**

It is a digitalization pack that allows the complete management of the process with complete traceability from the reception of the olives to the final storing of oil.

It allows the management of data and trend graphs which are registered and exportable and correspond to each one of the phases of the process. Everything is included in a single traceable software that also allows remote control of your factory. The Mill 4.0.

■ **Comprehensive management of the fully traceable process from reception of olives to the final storing of olive oil.**

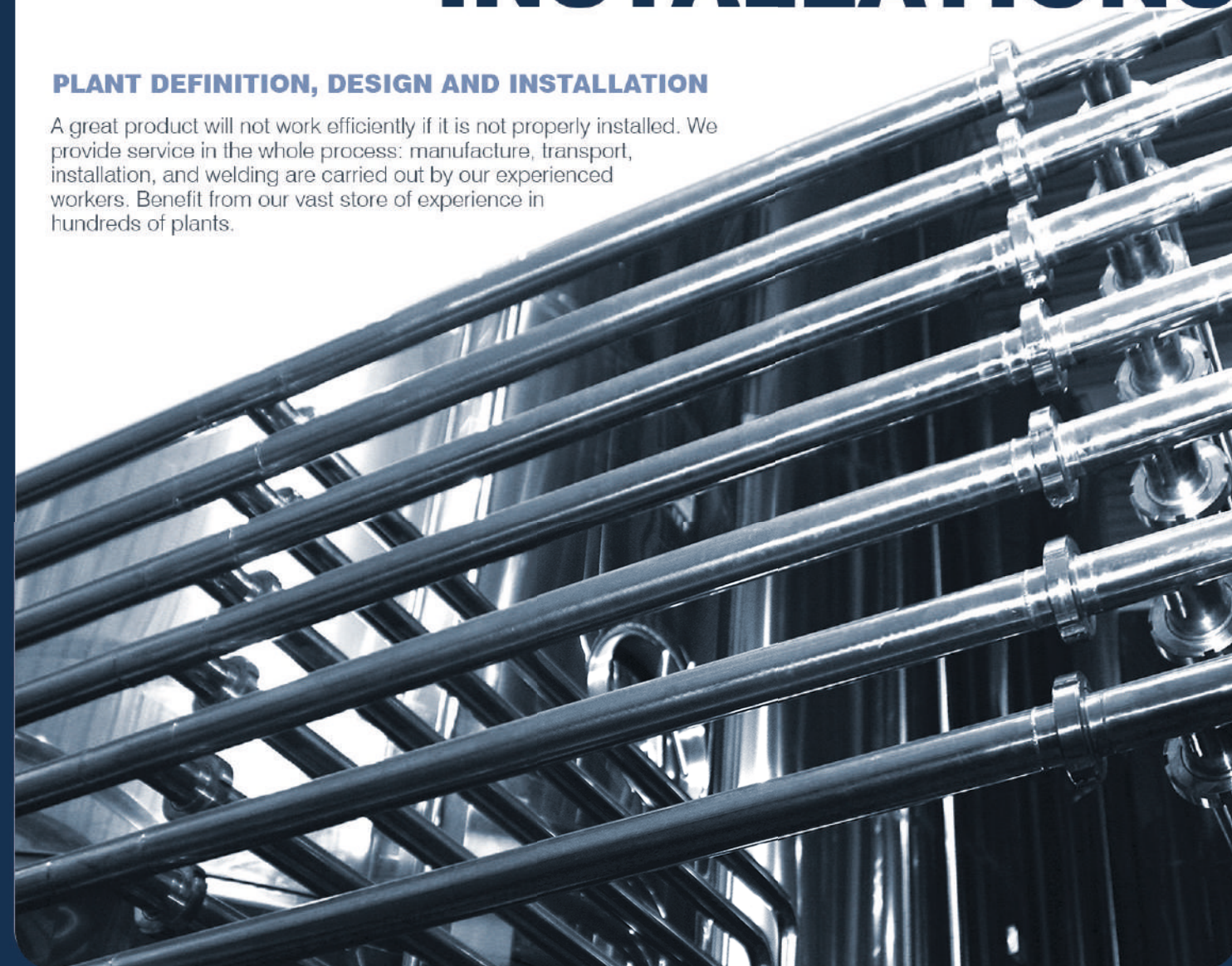
■ **Recorded and exportable data and trend graphs.**

■ **Remote control of your factory.**

# INSTALLATIONS

## PLANT DEFINITION, DESIGN AND INSTALLATION

A great product will not work efficiently if it is not properly installed. We provide service in the whole process: manufacture, transport, installation, and welding are carried out by our experienced workers. Benefit from our vast store of experience in hundreds of plants.





# OFFICIAL TECHNICAL SERVICE

DO NOT LEAVE YOUR MACHINES IN THE HANDS OF THIRD PARTIES  
WE ARE **THE EXCLUSIVE REPRESENTATIVE**  
OF FLOTTWEG

Direct training from Flottweg.  
Access to the original design of your machine.  
Original parts from the manufacturer.



## OWN REPAIR PLANT FULLY EQUIPPED



Repair or reconstruction in our  
headquarters in Bujalance (Córdoba).

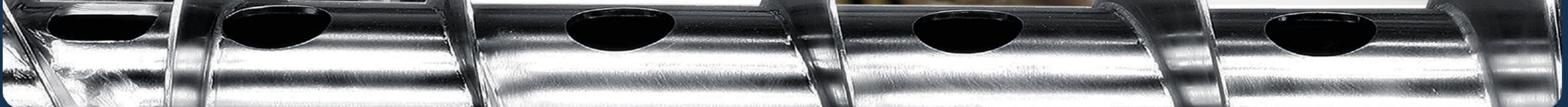
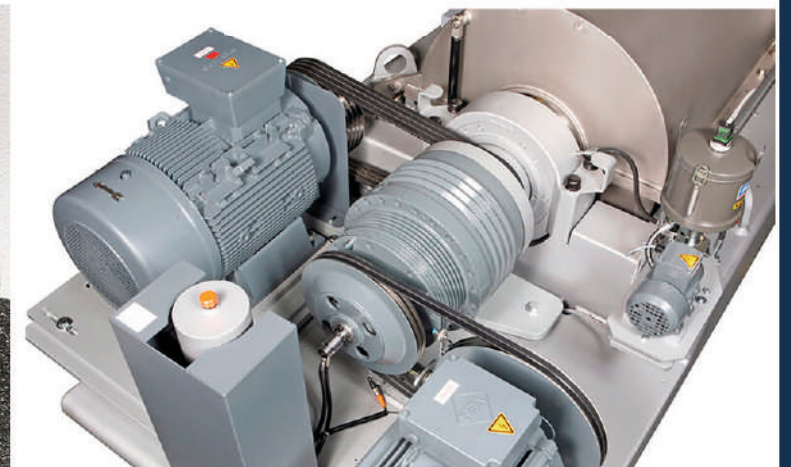
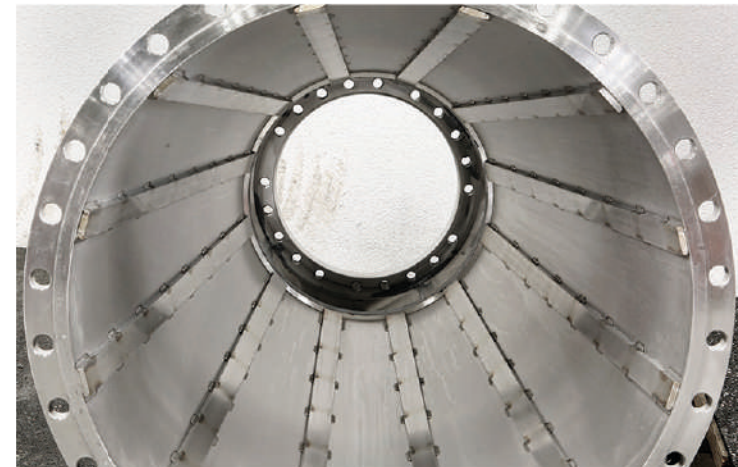
Fully machined finishes. Unbeatable  
finishes.

Certified balancing and annual recording  
of changes to reduce costs.

# **Flottweg**

ONLY THE **THE ORIGINAL PARTS** GUARANTEE  
THE DURABILITY AND PERFORMANCE OF YOUR MACHINE

Original spare parts Flottweg.  
Gear motors manufactured by Flottweg. Replacement and spare parts in record time.  
Designs aimed at lengthening the life of your machines and reducing the cost.





# SERVICE

## ORIGINAL SPARE PARTS MANZANO - FLOTTWEG

To our agile service of spare parts, with a complete brochure in which our customers can support themselves to identify the pieces and know their price, is now joined the online store of spare parts Manzano-Flottweg.

In addition, Flottweg has entrusted us with the exclusivity of the original wear parts that all its olive oil customers may need. Your spare parts available in the shortest possible time.



### SPARE PARTS STORE FLOTTWEG ORIGINAL PARTS

Phone: +34 656 874 495  
[recambios@caldereriamanzano.net](mailto:recambios@caldereriamanzano.net)  
[www.repuestos.caldereriamanzano.net](http://www.repuestos.caldereriamanzano.net)

## TECHNICAL REPAIR SERVICE

Since the launch of the piston pumps in 1996, Manzano has mobile stores with all the parts that may be needed by the expert technician who comes to your mill for breakdowns or periodic inspections. We know that you can not afford a long stop in your factory. We want you to work at the highest level of reliability in our equipment.



### TECHNICAL SERVICE

Phone: +34 608 367 248  
[serviciotecnico@caldereriamanzano.net](mailto:serviciotecnico@caldereriamanzano.net)

# FACILITIES

## FACILITIES

CALDERERIA MANZANO has facilities in two locations in the province of Córdoba, Bujalance and Villafranca de Córdoba.

Bujalance is the headquarters of the company and has been originally and at the center of MANZANO's operations since 1918. In this place, we make the machines, and we manage the company. We have a total of 9000 m2, divided between shipping and receiving courses and 3000 m2 of facilities for the manufacture of parts and assembly of machines. The almost 500 m2 of administrative offices, permanent machinery showroom, and spare parts store for our customers were completely renovated in 2016.



In Villafranca de Córdoba, all the olive oil tanks and decanters supplied by the company since 2014 are completely manufactured; until then this manufacturing line shared the installations with that of the machines in Bujalance. All the process machinery was completely renovated, and the company relied on the best technology available internationally. We manufacture an average of 280 tanks per year, delivered in more than a dozen countries.







## TECHNICAL SERVICE

Phone: +34 608 367 248  
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## SPARE PARTS STORE FLOTTWEG ORIGINAL PARTS

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