



# **MDF TUMBLER**





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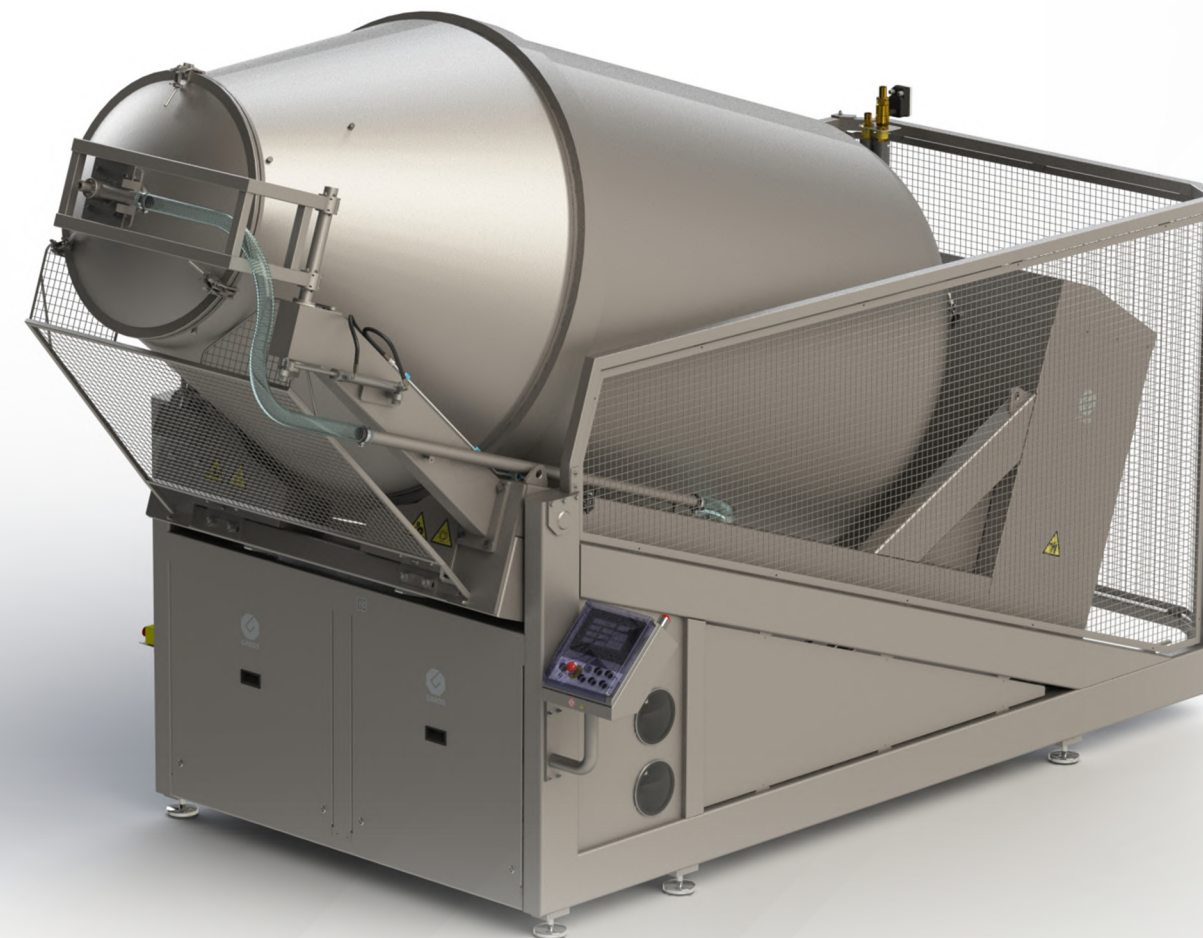
A broad range of tumblers with capacities ranging from 1600 to 10000 liters. The tumblers are designed for massaging, marinating, and defrosting of a wide range of meats. They are perfectly suited to meet the demands of pork, beef, poultry, and seafood products.

The crucial and completely deciding factor in achieving the desired result when tumbling is that the products get kinetic energy / mechanical working. The binding capacity achieved is in direct relation to the movement patterns of the products inside the drum. The more the movement is in as many directions as possible per revolution, the better the effect. The movement must be combined with a gentleness to keep the structure of the muscles intact. Cooling of the drum is also greatly significant to the end result, since it counteracts the heat generated by the kinetic energy, supplied and preserves the achieved binding capacity further along in the process.

The Garos MDF Tumbler is available in six different standard models with drum volumes of 1 600, 2 600, 3 900, 5 600, 7 500 and 10 000 litres as well as a load capacity of up to 65% of the volume, depending on product. All sizes have the cooling jacket as a standard feature.



## MDF TUMBLER ADVANTAGES



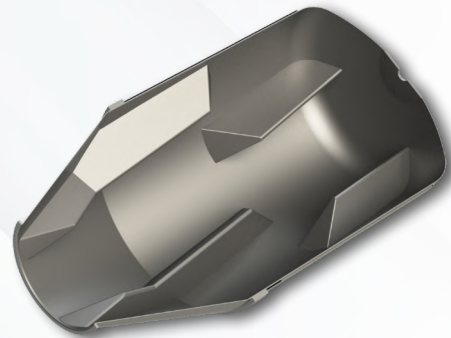
- ▶ **AUTOMATIC LID**  
system of automatic closing and opening the lid.
- ▶ **MULTI DISPLACEMENT FLIGHTS (MDF)**  
produce unsurpassed effectiveness.
- ▶ **HIGH LEVEL OF HYGIENE**  
thanks to a simple cleaning and the absence of inaccessible areas.
- ▶ **UP TO 30% LARGER LOAD**  
comparing to basic tumblers.
- ▶ **LOGICALLY DESIGNED**  
machine room for simple service, with components on rails for easy access.
- ▶ **OPTIONAL DOSING & WEIGHING SYSTEM**  
Accurate dosing of dry/wet ingredients with manual or automatic control and integrated weighing system.
- ▶ **OPTIONAL CO2/N2/STEAM**  
possibility of cooling, heating or defrosting.
- ▶ **COOLING JACKET**  
around the perimeter of the drum surface.
- ▶ **TILTED DRUM**  
Lifting and lowering system allowing for quick and easy discharge.
- ▶ **VACUUM PUMPS**  
advanced multistage filtration system.
- ▶ **PROCESS AUTOMATION**  
advanced control system and full control of all the massaging parameters.
- ▶ **SAFETY GUARANTEED**  
construction of the machine allows high safety level due to the guarding around the tumbler.



## MULTI DISPLACEMENT FLIGHTS

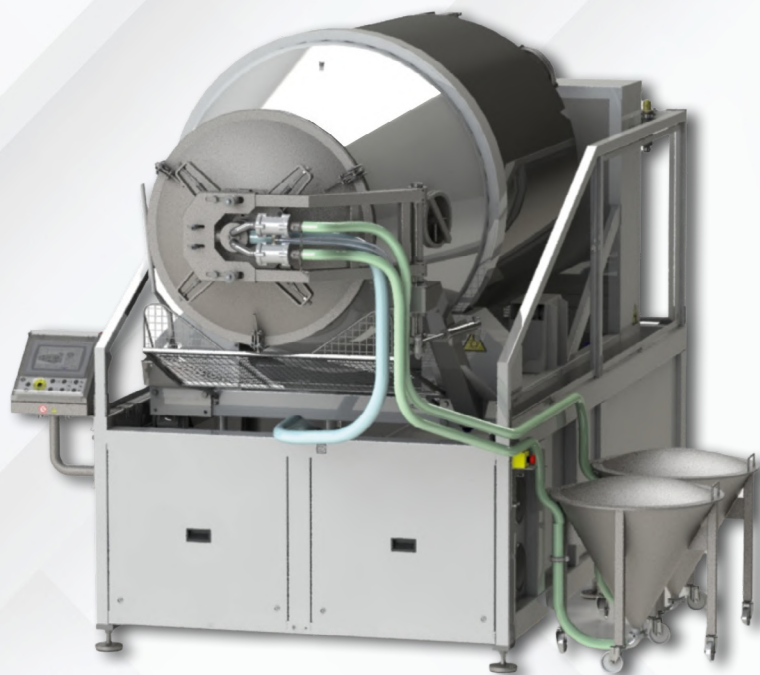
The **GAROS Tumbler** best answers efficiency requirements. The specially designed flights, create a completely unique 6-way movement.

With the incremental positioning and the asymmetrical design of the baffles, there is significantly more product movements per revolution, which is more effective without affecting the gentleness.



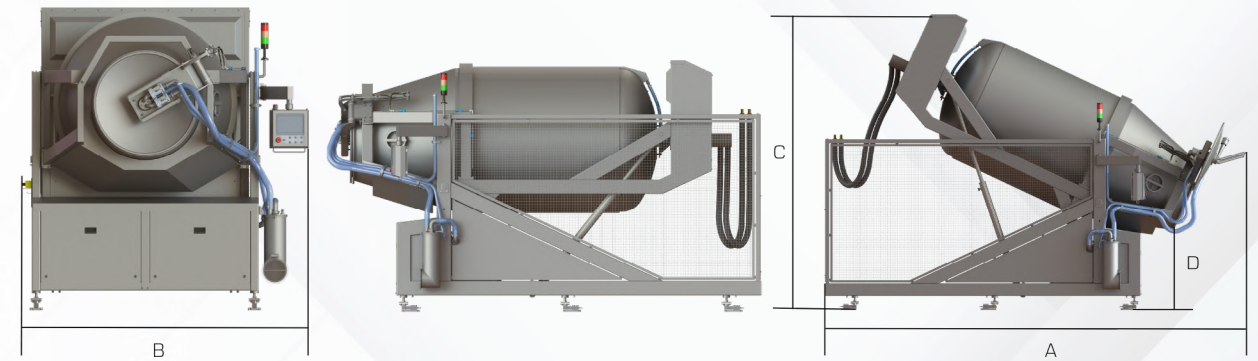
## INGREDIENTS DOSING AUTOMATIC

**Automatic dosing system** for a variety of dry and wet ingredients allowing for fine tuning of production processes. Optional weighing system combined with hoppers for dry or wet ingredients, allows many different possibilities and solutions such as connecting the system directly to brine mixers, storage tanks, and other production lines.



**Advanced control** of the dosing process or continuous dosing, brings many benefits to the massaging process as it contributes to increased productivity and improved product quality.

By **saving recipes** the system is able to automatically dose specific amounts of additives measured in kilos/percentages relative to the total amount of product in the tumbler.



Measurements in mm	A	B	C	D	Weight in kg
MDF 1600	3690	1880	2685	900	1650
MDF 2600	4740	2115	3140	1070	2400
MDF 3900	5680	2360	3120	1075	3400
MDF 5600	6080	2580	3440	990	3570
MDF 7500	6535	2565	4220	1250	5800
MDF 10 000	6220	3109	4350	1115	7300

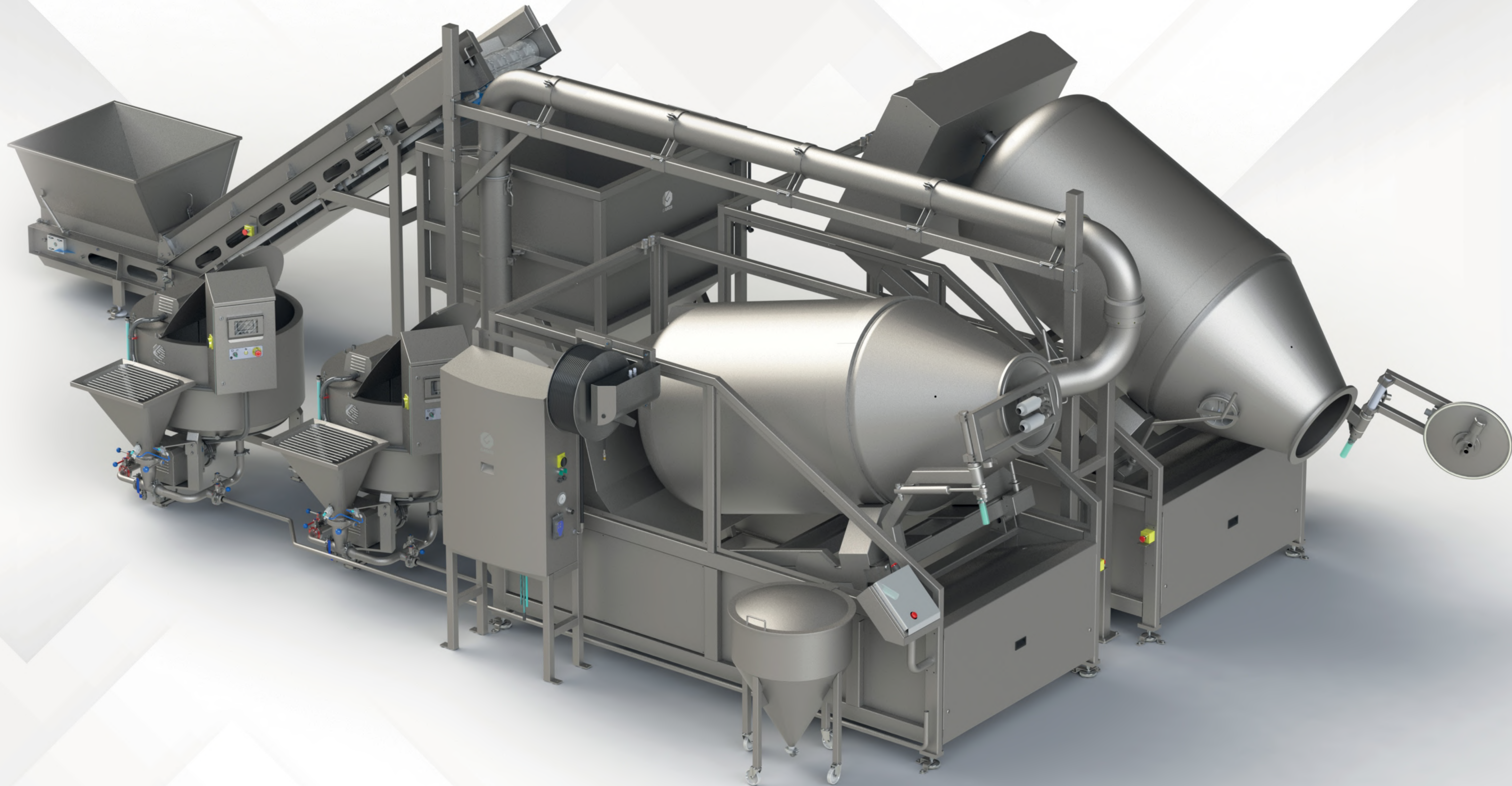
Technical Specification	MDF 1600	MDF 2600	MDF 3900	MDF 5600	MDF 7500	MDF 10000
Rated voltage	400V	400V	400V	400V	400V	400V
Rated over-voltage	24V	24V	24V	24V	24V	24V
Power drive unit	1,5kW	2,2kW	4kW	5,5kW	15kW	15kW
Power vacuum pump	1,1kW	1,5kW	2,2kW	5,5kW	5,5kW	5,5kW
Capacity vacuum pump	40m3/h	63m3/h	100m3/h	160m3/h	250m3/h	300m3/h
Power hydraulic pump	2,2kW	2,2kW	2,2kW	2,2kW	3kW	5,5kW
Max load capacity	1100 kg	1680 kg	2500 kg	3500 kg	4875 kg	6500 kg
Rotation speed drum	1,8-8 rpm	1,8-8 rpm	1,8-8 rpm	1,8-8 rpm	1,8-8 rpm	4-8 rpm
Internal drum diameter	1100 mm	1250 mm	1390 mm	1600 mm	1780 mm	1980 mm
No. of chicanes/carrier	3+3	3+3	3+3	3+3	4+4	4+4
Diameter drum opening	500 m	500 m	900 m	900 m	900 m	900 m
Cooling capacity	4,3kW	5,1kW	6kW	7,2kW	10kW	12kW
Volume, cooling jacket	40l	55l	66l	78l	110l	125l

We also offer a range of basic models. The GAROS GTB Tumbler is a basic solution of tumblers. Read out, GAROS Tumbler Basic, meets a demand of low cost tumblers often used at small and medium sized process facilities. We offer a range from 1600 litres up to 10 000 litres volume, controlled by an advanced micro-processor. For more information, please see our Basic Tumbler brochure.

GAROS reserves the right to make technical modifications in measures or design at any time.



# AUTOMATED LINES







RED MEAT



POULTRY



FISH

**AB Garos**

Box 343

551 15 Jönköping

SWEDEN

+46 36 18 11 30

[info@garos.se](mailto:info@garos.se)

[www.garos.se](http://www.garos.se)