

GAROS Tumbler



RED MEAT



POULTRY

Tumbler

A broad range of tumblers with capacities ranging from 700 to 10,000 litres.

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. But 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 farther 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.



Areas

- ✓ **RED MEAT**
- ✓ **POULTRY**

Benefits

- Gentle product handling
- Durable
- Used world wide

Contribution

- **Massaging**
- **Marinating**
- **Mixing**
- **Defrosting**



Tumbler



GAROS MDF (Multi Displacement Flights) is the tumbler on the market which best answers to the requirements efficiency combined with gentleness. The specially designed drivers/ flights create a completely unique 4-way movement.

With the double, incremental position and the symmetrical design, there is significantly more product movement/ massaging per revolution. More effective without turning its back on gentleness.

Characteristics and advantages:

Some of the characteristics and advantages:

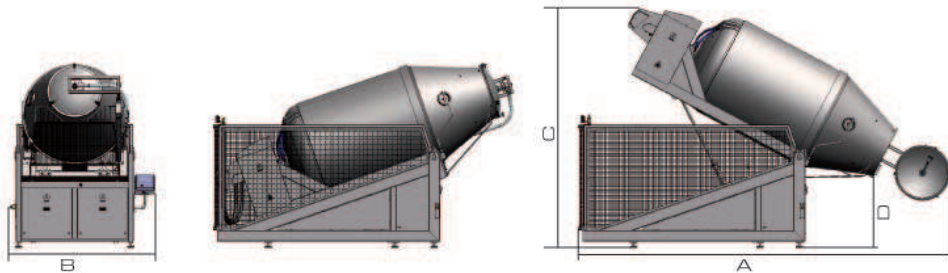
- MDF, Multi Displacement Flight, flights/ drivers produce unsurpassed effectiveness.
- Hydraulically adjustable drum.
- Cooling jacket.
- Large capacity.
- Advanced process control.
- Scale.
- Logically designed machine room for simple service, washing and cleaning.
- High level of safety.

Options

- CO₂/N₂ cooling.
- Defrosting.
- Choice between different flights/ drivers.



Technical details



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

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

Technical details

	MDF 1600	MDF 2600	MDF 3900	MDF 5600	MDF 7500	MDF 10 000
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	40m ³ /h	63m ³ /h	100m ³ /h	160m ³ /h	250m ³ /h	300m ³ /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 mm	500 mm	900 mm	900 mm	900 mm	900 mm
Cooling capacity	4,3kW	5,1kW	6kW	7,2kW	10kW	12kW
Volume, cooling jacket	40l	55l	66l	78l	110l	125l

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We also offer a range of basic "step-in" models. The GAROS GTB Tumbler is a step-in 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 700 litres up to 10 000 litres volume, controlled by an advanced microprocessor. For more information, please see our "Step-in" brochure.

Defrosting

In a standard GAROS MDF Tumbler it is possible to add a defrosting feature. This option makes it possible to cut processing time considerably when using frozen product.

Today the industry is more and more using frozen product in the beginning of the process. The necessity to defrost in a quick and safe way has become extensively important while frozen product is often much cheaper and easier to come over than fresh product. In order to reach a high quality product starting the process with frozen raw material the need to defrost in a controlled way is high. Using the GAROS defrosting feature ensures you not only to reach the best possible result but also of using a very cost efficient method.

The GAROS MDF Tumblers uses 3 different ways to achieve an efficient and controlled defrosting:

- Steam injected through the hatch.
- Heated media in the jacket of the drum.
- Vacuum inside the drum.

The steam used is a cold steam, only slightly higher than the room temperature. This mild temperature ensures that the product won't be cooked, damaged or altered in any way. Its colour, binding properties and structure remain perfectly intact. The combination of the three methods makes it possible to defrost quickly which is the key to operational flexibility and reduces lead time in the production process.

The GAROS Defrosting feature offers a speedy and cost efficient alternative to the traditional ways of defrosting such as tempering chambers or microwave systems. Vacuum defrosting delivers consistent results without incomplete defrosting or hot spots.

General benefits:

- Reduces defrosting time considerably.
- Increased yield, no weight loss through purge.
- Cost efficient solution with defrosting and massage in one machine.
- Low cost of ownership.
- High food safety with fast process in controlled environment.
- Hygienic design.

