



for the best

MMG 239 VA



MADO Extrusion Grinder

MMG 229, 233, 235, 239, 243

MADO Extrusion Grinder

For ambitious food processing companies and cost - conscious, quality - oriented food industry

The quality solution for sensitive food industry

Whether one processes raw, cured, cooked, fresh sausage or other comminuted food, MADO technology provides the most efficient production with the high quality. Products such as Hot Dogs, Vienna sausages, cold cut emulsions, cooked sausages such as liver sausage or coarser items such as fresh bratwurst or diverse as Krakauer, cooked and cured salami are all processed in a single step operation with the utmost efficiency, highest quality and the ultimate in hygiene. Due to the high performance of the Extrusion worms with up to 12 tons of processing capacity per hour, you can achieve the double application rate with the MADO Extrusion Grinder compared to a conventional mincer of the same cutting set size.

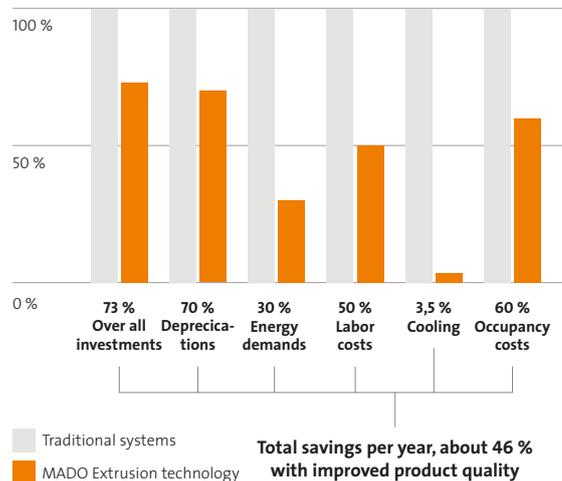
The MADO Extrusion Grinder is perfectly suited for the production of emulsions. In comparison to the standard bowl cutter or emulsifier line, this technology consumes only one third the electrical power at less than half the capital equipment cost. Furthermore, traditional use of ice for emulsifying is eliminated: The MADO Extrusion Grinder needs only water for the process. Start counting the savings.

For even better production results and more specialized applications, the MADO Extrusion Grinder can also be supplied with an optional vacuum device. Mixing under vacuum improves protein extraction and shortens the reddening time of the products. Also oxidation is reduced even with low levels of nitrite present. The product has a firmer texture and a longer shelf - life. An injection system for gas is also available to improve flavor and optimize color.



The innovative solution for the production of sausages and hamburgers

By using MADO Extrusion Grinder the traditional production method of sausage, sausage meat and hamburgers will be extremely simplified. Furthermore the product quality will be increased and costs reduced by 50 %.



A new age has dawned for the food processing industry

The MADO Extrusion Grinder is a patented invention, reducing three machine processes into one machine. Cutting, mixing and homogenization are all accomplished within this single unit, saving capital costs, reducing processing time and eliminating the transfer of product from one machine to another. Imagine the elimination of transfer conveyors, the space and maintenance they require and the efficiency improvement that this machine offers. Another benefit of the MADO Extrusion Grinder is this machine's significant improvement in hygiene levels as well as the commensurate reduction and simplification of cleaning the machine: rather than three machines to supply electricity to, manage (man power), maintain, clean and provide floor space for MADO Extrusion Grinder truly does it all in one machine for fraction of the cost.

The advantages are in detail

Excellent product quality

- Integrated several processes within a single machine reduce microbial contamination of the raw material by up to 80 %.
- Optimized homogenous mixing of all ingredients through patented cutting technology.
- The clear particle definition allows the processor to present an exceptional product.
- The double feed worm system prevents air pockets in the emulsion.

Cost savings

- Mixing, grinding and emulsifying in one machine shorten processing times and reduces capital costs. This saves time and money.
- Integrating the processing steps makes conveyors and other transporting means obsolete and results in huge space savings and significantly reduced cleaning procedures.
- In emulsions, water is used instead of ice. This improves hygiene, while significantly cutting operating costs.
- Optimized production efficiency means significantly lower energy consumption compared with standard processing methods.

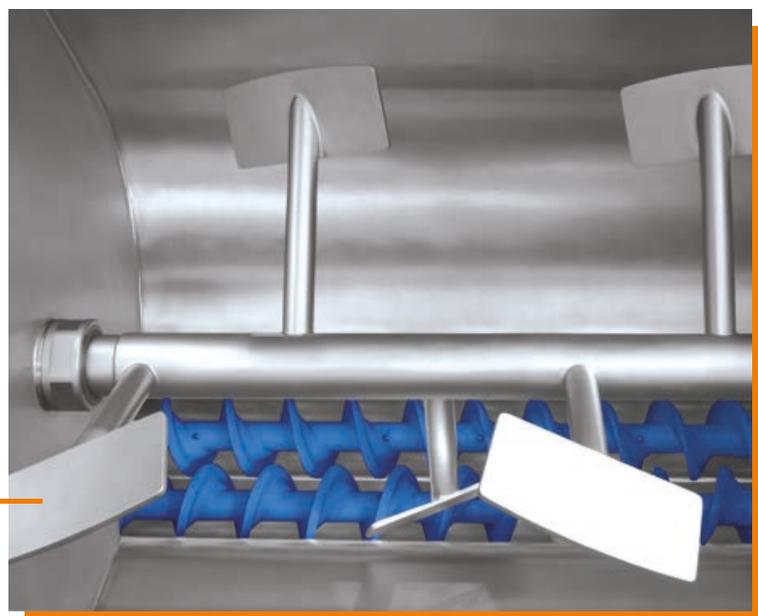
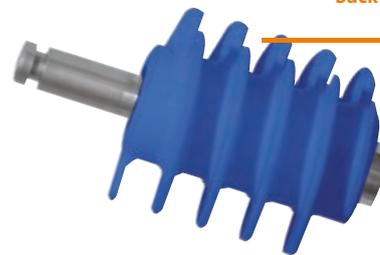
Patented solutions for your production advantage

The speed of the mixing unit is variable and operates both forward and reverse. During the mixing process, the two feed worms run in reverse and push the material up the back wall of the hopper. This significantly enhances product mixing while reducing the blending time. When processing pork, $\Delta-t$ is only 0,5° C when using a 3 mm end hole plate.

Increase profitability

High levels of output up to 12 metric tonnes per hour means significantly lower capital requirements compared with standard processing methods.

Mixing worm with integrated back flow openings for optimal mixing results



MIXING DEVICE

“DuoSepar” Separating device

The MADO Extrusion Grinder can be equipped with the patented “DuoSepar” separating device upon request. This system separates gristle and sinews with maximum effectiveness. Processes which cause stress to raw materials, such as conventional separation systems, can also be eliminated, thus increasing your savings. The “DuoSepar” system consists of two separator units (lateral and central), which work independently of each other. The pneumatically operated control valves for the two separators are infinitely adjustable. On request a worm separating device for central separation is available.

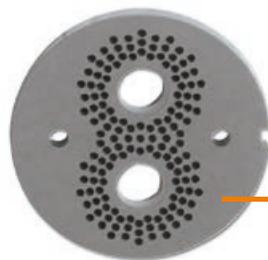
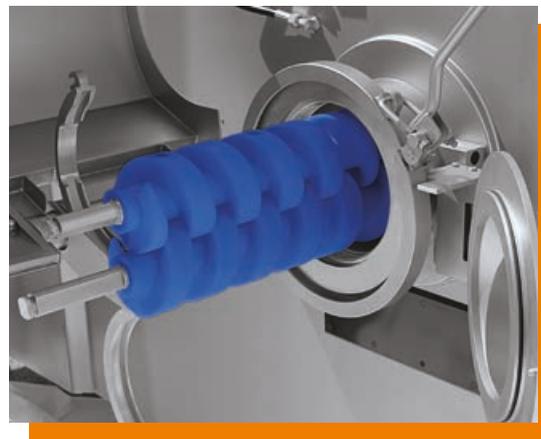
Double grinding device

Depending on which products are to be manufactured, it is recommended to use the MADO double grinding device. The patented mixing worm is equipped with integrated back flow openings. This enables the raw material to be mixed optimally with spices and other ingredients. This supplemental mixing and cutting unit is especially suited for the production such as liver sausage.

DUOSEPART PNEUMATIC



EXTRUSION WORMS



Hole plates are used for a gentle cutting process

This is simply a must and it is included

Cleaning platform

To enable you to get the most out of your MADO Extrusion Grinder, the machine comes complete with a robust cleaning platform. The platform is equipped with a safety interlock to provide the utmost in safety. All MADO Extrusion Grinder drives are controlled by frequency converters and are thus completely variable in speed. Operators can also adjust the individual times and cycles of the mixing unit. All electrical elements are compactly sealed in the machine housing and are thus protected against moisture. A separate electric control cabinet is not necessary.

- Programmable control unit.
- Feeding worms with infinitely variable speed adjustment.
- Mixing arm with infinitely variable speed adjustment.
- Extrusion Grinder worms with infinitely variable speed adjustment.
- Cleaning platform.
- Tool trolley.

State-of-the-art drive concept

The MADO Extrusion Grinder has a compact control panel, with an easy - to - operate control that is splash resistant. Up to 99 separate operating programs can be stored.

TOOL CARRIAGE FOR ALL ACCESSORIES

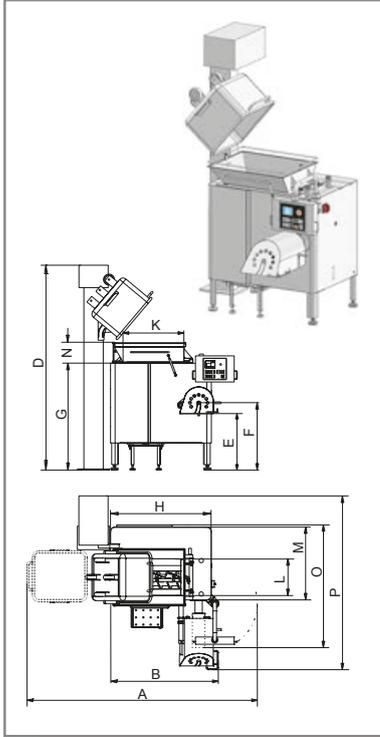


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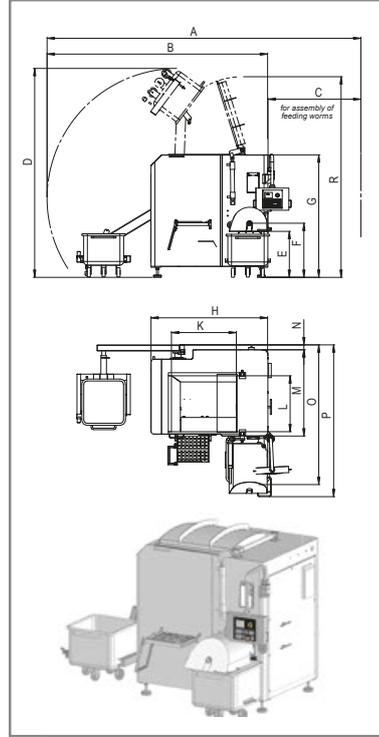


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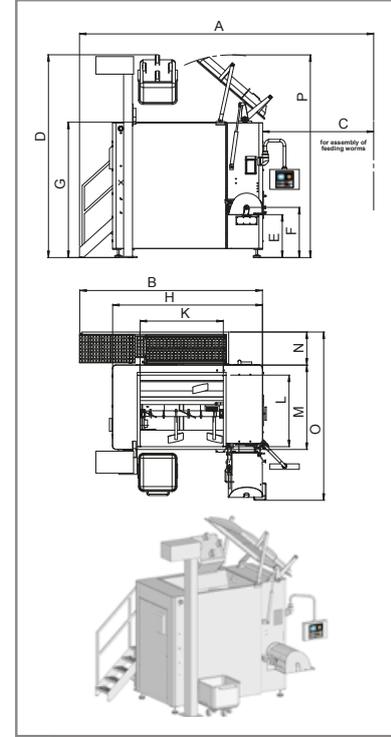
MMG 229



MMG 233



MMG 235-243



	MMG 229	with loading device	MMG 233	MMG 235	MMG 239	MMG 243
A	1950 mm	3180 mm	4540 mm	4800 mm	5000 mm	5200 mm
B	1500 mm	1500 mm	3500 mm	2900 mm	3100 mm	3300 mm
C			1040 mm	1900 mm	1900 mm	1900 mm
D	1800 mm	3000 mm	3400 mm	3400 mm	3725 mm	3725 mm
E	780 mm	780 mm	740 mm	740 mm	740 mm	740 mm
F	930 mm	930 mm	880 mm	880 mm	880 mm	880 mm
G	1475 mm	1475 mm	1990 mm	2100 mm	2300 mm	2500 mm
H	1380 mm	1380 mm	1880 mm	2710 mm	2710 mm	2710 mm
K	850 mm	850 mm	1050 mm	1500 mm	1500 mm	1500 mm
L	520 mm	520 mm	900 mm	900 mm	1000 mm	1300 mm
M	1060 mm	1060 mm	1400 mm	1500 mm	1500 mm	1600 mm
N		290 mm	80 mm	620 mm	620 mm	620 mm
O	1750 mm	1750 mm	2450 mm	3050 mm	3050 mm	3050 mm
P	2000 mm	2400 mm	2550 mm		3600 mm	
R			3260 mm			
Extrusionworms	Ø 80 mm	Ø 80 mm	Ø 125 mm	Ø 125 mm	Ø 125 mm	Ø 125 mm
Type of current	400 V, 50 Hz 3-phase AC					
Capacity	AS 18,5 kW ZS 5,5 kW MW 1,1 kW	AS 18,5 kW ZS 5,5 kW MW 1,1 kW	AS 37,0 kW ZS 11,0 kW MW 4,0 kW	AS 64,0 kW ZS 19,0 kW MW 11,0 kW	AS 64,0 kW ZS 19,0 kW MW 18,0 kW	AS 64,0 kW ZS 19,0 kW MW 18,0 kW
Fuse protection	63 A inert	63 A inert	100 A inert	200 A inert	250 A inert	250 A inert
Revolutions	AS 50-350 rpm ZS 5-35 rpm MW 5-30 rpm	AS 50-350 rpm ZS 5-35 rpm MW 5-30 rpm	AS 50-300 rpm ZS 5-35 rpm MW 5-33 rpm	AS 50-300 rpm ZS 5-36 rpm MW 5-33 rpm	AS 50-300 rpm ZS 5-36 rpm MW 5-33 rpm	AS 50-300 rpm ZS 5-36 rpm MW 5-33 rpm
Cutting set	Unger E 130 3, 5 or 7 parts	Unger E 130 3, 5 or 7 parts	Unger U 200 3, 5 or 7 parts			
Output per hour product specific	approx. 3600 kg/h	approx. 3600 kg/h	approx. 7000 kg/h	approx. 7000 kg/h	approx. 12000 kg/h	approx. 12000 kg/h
Hopper volume	approx. 140 litres	approx. 250 litres	approx. 500 litres	approx. 1000 litres	approx. 1500 litres	approx. 2200 litres
Weight	approx. 1100 kg	approx. 1400 kg	approx. 3200 kg	approx. 3000 kg	approx. 3300 kg	approx. 3450 kg

Dimensions and Technical Data - Technical alterations are subject to change - This drawing is only a layout and do not complies with our construction drawings - Exact mounting dimensions should be obtained