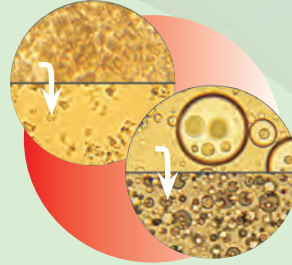


MT 3000

*Inline
homogenizer for
throughputs up
to 40 l/min*

*Homogenizing
and Mixing
Technology for
the laboratory*

LAB Scale
continuous
In-Line /
Recirculating



DISPERSING

HOMOGENIZING

EMULSIFYING

SUSPENDING

WET MILLING

MIXING



KINEMATICA.CH

Dispensing and Mixing Technology

MT 3000 - Powerful, efficient, low noise

The MEGATRON® MT 3000 HighEnd System is the smallest available continuous working In-Line/Recirculating homogenizing system with scale up possibility at comparable tip speeds and a throughput capacity of approx. 10 to 15 l/min. This unit, with its unique features, will improve already known applications and enter new areas of applications. This will be achieved by much higher tip speeds i.e. by adjustable rotor speeds up to 30'000 rpm. Thus results will be obtained with even finer and smaller droplets/particles down to approx. 1 µm depending on the properties of the processed media.

The MEGATRON® MT 3000 processor will mostly be installed to a recirculating system as an alternative way of batch processing.

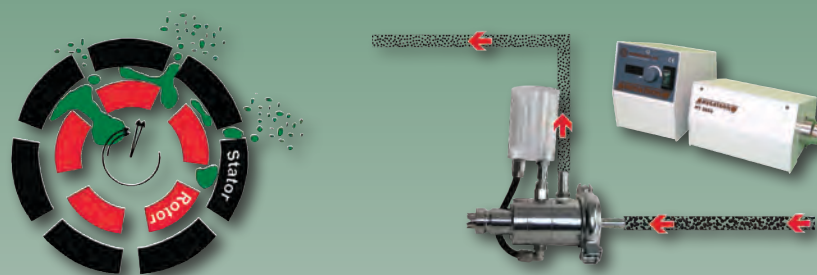
The main advantage of the MEGATRON® MT 3000 lab system is the possibility of simulating later pilot plant or production on a laboratory scale. These tests can be done with a minimum amount of product and energy.

The MEGATRON® MT 3000 Rotor/Stator Homogenizer disperses, emulsifies and reduces the size of solid particles, droplets and gas bubbles down to a few microns or less.

Further outstanding features:

- 800 Watt powerful drive unit with a wearless three phase highfrequency motor for continuous operation
- Controlled by a frequency inverter, connection to a standard 230 V wall socket
- Electronic speed regulation and stabilization
- Soft-Start and thermal overload protection (PTC)
- Variable, stepless speeds up to 30'000 rpm with visual indication
- Noise level lower than <75 dB(A)
- In-Line working chamber with single mechanical seal and quench system and NW8 tube olives as standard inlet/outlet connections (others on request) and NW8 tube olives as standard inlet/outlet connections (others on request)
- 3 different Dispersing Generators, easily interchangeable
- All parts in contact with the product are made of electropolished stainless steel 316L
- Permanently lubricated, high temperature resistant, high speed ball bearings
- Large collection of recirculating systems with dispersing vessels and accessories
- CE label

Principle of process



The Rotor/Stator principle for dispersing and homogenizing equipment, originally invented by KINEMATICA, has become the worldwide accepted standard for homogenizing and dispersing a solid or fluid or gaseous phase into a fluid phase.

MEGATRON® are inline homogenizers with a forced flow of the mixture through a working chamber. In the working chamber, the product will be processed by the rotor/stator dispersing generator(s).

With the series MEGATRON® KINEMATICA has set standards once more for the inline homogenizing technology regarding efficiency, safe operation and long working life of the machinery for a broad application area within almost every industry field.

Technical Data



Motor power, type	800 Watt (output), 3-ph. induction motor
Speed control	Integrated electronic speed regulation with control knob, soft start and LED display
Supply Voltage	230V / 50Hz or 100-120V / 60 Hz
Speed at Dispersing Rotor max.	30'000 rpm (depending on dispersing aggregate and medium)
Noise emission (w/o load)	approx. 70 dB(A) at 30'000 rpm
Ambient	0 - 40°C, 95% max. rel. humidity
Standards	EMC according to IEN / IEC 61010, EN / IEC 61326-1
Protection class	IP 20
Dimensions (drive/control unit)	230x160x160 mm / 160x200x220 mm
Weight (drive/control unit)	6.84 kg / 3.94 kg

Speed regulation and LED display



With the drive unit **MEGATRON® MT 3000**, stepless rotor speeds up to 30'000 rpm can easily be adjusted (depending on the chosen dispersing generator and the product to be treated) and read out from the visual speed indication.

Drive unit / Working Chamber

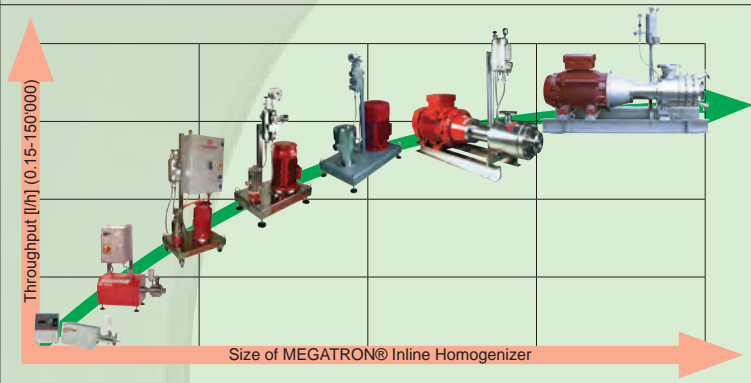


Order No.	Description
13010002	MT 3000, 230 V (EU/UK-plug)
13010001	MT 3000, 230 V (CH-plug)
13010003	MT 3000, 100-120 V
13032001	MTO 3000 Q

Working Chamber with single mechanical seal, with quench with TS1 vessel made from PVC, pressureless, for cooling and lubricating of the mechanical seal, without cooling/heating jacket. In-/Outlet of the working chamber through standard tube olives NW8, others on request.

Scale-up

The **MEGATRON® MT 3000** is the smallest unit available for continuous In-Line/Recirculating processes. **KINEMATICA** offers a complete series of continuously working In-Line/Recirculating processors suitable for throughputs up to 150'000 l/h. The test results obtained with the laboratory unit can be used as a reliable data source for a scale-up step to the larger **MEGATRON®** pilot plant and production machines.



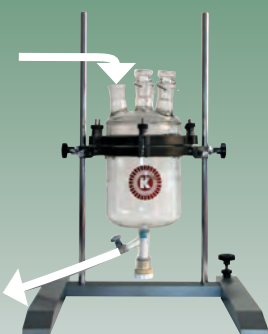
Efficiency, flexibility and protection

The ideal processor configuration is selected from a choice of three different generators to be installed into the working chamber.

A single mechanical seal is used in the working chamber which is cooled and lubricated by the product. In addition there is a connection to a non-pressure back-up cooling quench with a small container as a fail-safe device.

The rotor/stator shear generators are designed for efficiency and longevity. The combination of high tip speed of the rotor and the specific design of the entire generator, result in higher shear forces and greater throughput.

Recirculating systems

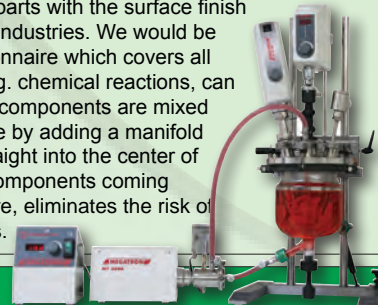


Example of a working tank for a recirculating system, connectable to the MEGATRON® MT 3000

Order No.	Description
13050002	2 Liter Circ. System with single wall vessel from borosilicate glass DN150 with bottom discharge valve, vessel cover DN 150 from borosilicate glass with 3x NS29/32 and 1x NS14/32 connections and stable stand for the complete circulation system.
13050001	2 Liter Circ. System (explained above) but with a double wall vessel and heating / cooling connections: hose connections Ø 9mm.

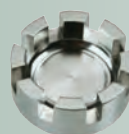
Complete continuous In-Line/Recirculating Systems

The real benefit of a homogenizer is enhanced when offered as a complete working system which includes all necessary peripheral accessories. We can complement your MT 3000 with circulating tubes and working tanks. These items can be chosen from our standard program. They are available as complete sets made of glass or stainless steel, with or without cooling/heating jackets. They can also be built according to your specific requirements. Superb Swiss workmanship gives you precision parts with the surface finish required in the food and pharmaceutical industries. We would be glad to send you our applications questionnaire which covers all important points. Certain applications, e.g. chemical reactions, can only be accomplished successfully if the components are mixed right inside the generator. This is possible by adding a manifold which allows injecting of fluids or gas straight into the center of the generator. This prevents the single components coming into contact with each other and, therefore, eliminates the risk of pipe blockage and uncontrolled reactions.



Dispersing Generators

Model	Type MTG 20/2 generator	Type MTG 30/2 generator	Type MTG 30/4 generator
	<ul style="list-style-type: none"> Standard model Rotor/stator with one teeth row each 	<ul style="list-style-type: none"> Standard model Rotor/stator with one teeth row each 	<ul style="list-style-type: none"> Standard model Rotor/stator with two teeth row each
Order No.	13031020	13031030	13031031
Stator/Rotor-Ø	20 mm / 15.4 mm	30 mm / 24 mm	30 mm / 26 mm
Maximum Tip Speed	25 m/s	35 m/s	34 m/s
Throughput	ca. 20 l/min (depends on the medium)	ca. 40 l/min (depends on the medium)	ca. 30 l/min (depends on the medium)
Applications	<ul style="list-style-type: none"> Dispersing and mixing of particles in liquid Suspending, crushing, wet milling, extracting Preparing of samples for extraction and decomposition of organic material Intensive mixing and many others... 	<ul style="list-style-type: none"> Dispersing and mixing of particles in liquid Suspending, crushing, wet milling, extracting Preparing of samples for extraction and decomposition of organic material Intensive mixing and many others... 	<ul style="list-style-type: none"> Producing fine suspensions and emulsions Dissolving of solids Gasses solutions Separates fibers and cellular material in very small particles Extractions Wet milling of solids and many others...



HOMOGENIZING AND MIXING TECHNOLOGY



A wide range of products with the finest solution for every application, matched by the superior quality of all components make KINEMATICA a world leader for Dispersing and Mixing technology.

With Keen Eyes ...

Development knows no rest at KINEMATICA. Our systems are constantly upgraded to reflect the state-of-the-art technology and the needs of the market. KINEMATICA has always had a keen eye for major advances, as proven by various patents.

The rotor/stator principle for dispersing technology was conceived and developed at KINEMATICA and has become the world standard.

... For Your Needs

Applications for Dispersing/Homogenizing Technology are always on the increase. KINEMATICA continually creates new areas of processing applications based on innovations. We do not neglect the human factor as it is exemplified by the safe and comfortable operation and noise reduction of our high-speed systems.

Please, get in touch with us, our local appointed agent or your preferred dealer. We will be pleased to supply more details or arrange a personal demonstration of our POLYTRON® and MEGATRON® systems.

POLYTRON Finest Swiss Made solutions... worldwide! +

PT 3100 D
Digital High-End Benchtop Homogenizer with PC Interface

Homogenizing and Mixing Technology for the Laboratory

- DISPERSING
- HOMOGENIZING
- EMULSIFYING
- SUSPENDING
- WET MILLING
- MIXING



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MEGATRON Finest Swiss Made solutions... worldwide! +

MT 5100
Inline Homogenizer for throughputs up to 65 l/min

Homogenizing and Mixing Technology for Pilot Plant and Small Scale Production

- DISPERSING
- HOMOGENIZING
- EMULSIFYING
- SUSPENDING
- WET MILLING



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- POLY MIX
- MEGATRON
- REACTRON

Homogenizing and Dispersing Technology for

Laboratory & Pilot Plant

- HOMOGENIZING
- EMULSIFYING
- SUSPENDING
- WET MILLING
- MIXING
- DRY MILLING
- FOAM PRODUCTION
- POWDER INTRODUCTION



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- POLY MIX
- REACTRON

Homogenizing and Dispersing Technology for

Pilot Plant & Production

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- SUSPENDING
- WET MILLING
- MIXING
- POWDER INTRODUCTION
- FOAM PRODUCTION



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Headquarters

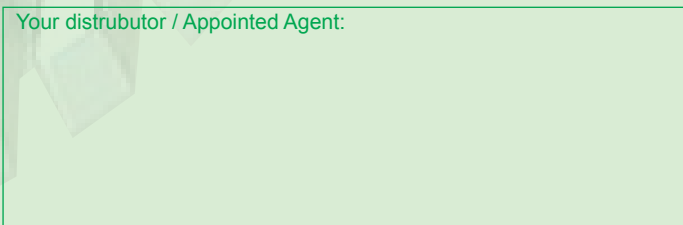


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