

POLYTRON®

DISPERSING AND MIXING TECHNOLOGY BY KINEMATICA

Dispersing Technology in the Laboratory

System POLYTRON® PT 1600 E - Benchtop Homogenizer, *EcoLine*



KINEMATICA AG
Dispersing and Mixing Technology

POLYTRON® System PT 1600 E - sturdy, powerful, efficient

An economical system for small sample treatment

The Rotor/Stator principle for dispersing equipment, originally invented by KINEMATICA, has become the accepted standard for homogenizing, dispersing and emulsifying worldwide.

The POLYTRON® PT 1600 E „EcoLine“ belongs within the KINEMATICA homogenizer program to the benchtop models for **small** scale applications in the range of approx. 0.1 - 250 ml. This unit offers the user the same well known KINEMATICA high quality properties for a fast and 100% successful sample preparation for a very economic budget; a good way to enter the world of homogenizing with POLYTRON® the number one in dispersing and mixing based on the Rotor/Stator technology.

The dispersing system POLYTRON® PT 1600 E convinces with the following features:

- 300 Watt motor power (230V/115V)
- rotor speed range from 5 000 up to 30 000 rpm
- integrated electronic speed regulation/stabilisation
- with control knob and speed scale
- soft-start
- quick coupling for dispersing aggregates
- 4 interchangeable dispersing aggregates in EC design
- universal plate stand
- large collection of dispersing vessels and accessories
- CE label

Speed regulation with analog speed scale

With the drive unit POLYTRON® PT-MR 1600 E, stepless rotor speeds between 5000 and 30 000 rpm can easily be adjusted (depending on the chosen dispersing aggregate, and the product to be treated) and read out from the speed scale.

Quick Coupling for Disersing Aggregates

A unique quick coupling system allows to change the dispersing aggregate with one hand within seconds.

POLYTRON® EasyClean Dispersing Aggregates

The modern **EC** aggregates are equipped with saw-teeth which increase the efficiency in the preliminary size reduction of the droplets/particles and considerably shortens the processing time. The tips of the teeth are secured by a ring which avoids the teeth from bending. The whole dispersing aggregate is made from superior grade stainless steel (1.4435/316L) and is electro polished.

All these POLYTRON® EC dispersing aggregates are equipped with special slide bearings made of a Teflon compound, which have extraordinary mechanical characteristics and superior chemical resistance.

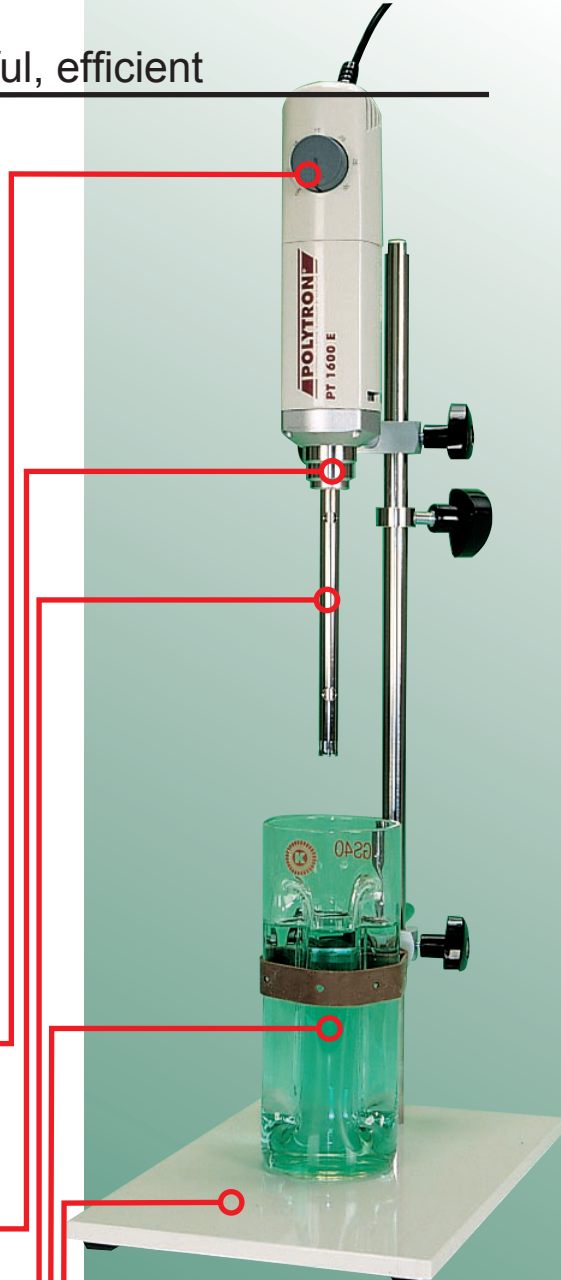
The complete aggregate can be dismantled in two to three steps, easily cleaned and sterilised e.g. autoclaved.

Efficient Accessory

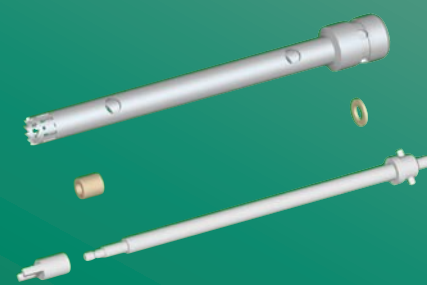
Most effective are the specially designed cloverleaf shaped dispersing vessels. Thanks to the concentrated turbulences by built in baffles, the working time is reduced considerably. Available from borosilicate glass or stainless steel, with/without lids in different sizes from 25 ml up to 10 ltrs.

Practical Stand PT-ST 1603

The practical plate stand PT-ST 1603 allows to work with a maximum flexibility whilst keeping the hands free. The drive unit is fixed on the plate stand and the safety positioning ring prevents an uncontrolled moving of the drive. The vessel holder fixes safely the working dispersing vessel and enables a hands free working.



Dispersing Aggregate: Quick coupling with one hand

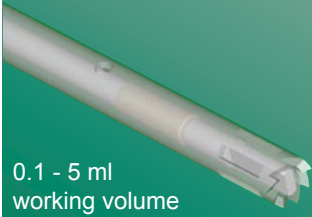
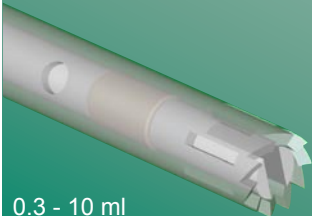

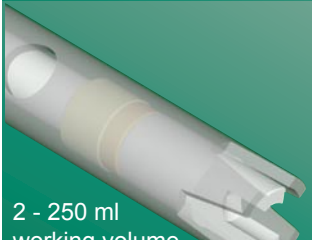


Dismantled POLYTRON® EasyClean (EC) Dispersing Aggregate

POLYTRON® System PT 1600 E - dispersing with Know-How

POLYTRON® Dispersing-Aggregates

From a choice of 4 different dispersing aggregates the most suitable can be selected for your specific application and processing volume between approx. 0.1 ml and 250 ml.

Dispersing-Aggregate	Application examples	Technical Data
 <p>PT-DA 1605/2EC suitable for test tubes, e.g. Eppendorf tubes, vessels with min. 6-7 mm internal diameter</p> <p>0.1 - 5 ml working volume</p>	<p>Dispersing of smallest amounts of plant, soft animal or soft human tissues in liquid e.g. for RNA extraction and many others...</p>	<p><i>Solid/Liquid ratio</i> 1:5 <i>Shaft Length</i> 80 mm <i>Stator-Ø / Rotor-Ø</i> 5.6 mm / 3 mm <i>Tip speed up to</i> 4.7 m/s</p>
 <p>PT-DA 1607/2EC suitable for test tubes, e.g. Eppendorf tubes round bottom, vessels with min. 8-9 mm internal diameter</p> <p>0.3 - 10 ml working volume</p>	<p>Dispersing of smallest amounts of plant, animal or human tissues in liquid e.g. for RNA extraction Breaking up of cells Dissolving of solids in liquid and many others...</p>	<p><i>Solid/Liquid ratio</i> 1:5 <i>Shaft Length</i> 107 mm <i>Stator-Ø / Rotor-Ø</i> 7.8 mm / 5 mm <i>Tip speed up to</i> 7.8 m/s</p>
 <p>PT-DA 1612/2EC suitable for KINEMATICA dispersing vessel GS 15 and larger, vessels with min. 14 mm internal diameter</p> <p>2 - 250 ml working volume</p>	<p>Dispersing of tissues, resins and pigments in liquid Extractions Breaking up of tablets for QA Producing of suspensions and emulsions and many others...</p>	<p><i>Solid/Liquid ratio</i> 1:10 <i>Shaft Length</i> 154 mm <i>Stator-Ø / Rotor-Ø</i> 11.8 mm / 9 mm <i>Tip speed up to</i> 14.1 m/s</p>
 <p>PT-DA 1612/2WEC suitable for KINEMATICA dispersing vessel GS 15 and larger, vessels with min. 14 mm internal diameter</p> <p>2 - 250 ml working volume</p>	<p>Special Stator design suitable for fibrous and tough sample material such as meat, fish, fruits, vegetables, etc. and many others...</p>	<p><i>Solid/Liquid ratio</i> 1:10 <i>Shaft Length</i> 154 mm <i>Stator-Ø / Rotor-Ø</i> 11.8 mm / 9 mm <i>Tip speed up to</i> 14.1 m/s</p>

Order information for System POLYTRON® PT 1600 E

Order-No.	Order-ID	Description
11010040	PT-MR 1600 E / 230V	Drive unit 230V, 50/60 Hz
11010042	PT-MR 1600 E / 115V	Drive unit 115V, 50/60 Hz
11030007	PT-DA 1605/2EC	Dispersing-Aggregate
11030022	PT-DA 1607/2EC	Dispersing-Aggregate
11030042	PT-DA 1612/2EC	Dispersing-Aggregate
11030060	PT-DA 1612/2WEC	Dispersing-Aggregate
11040015	PT-ST 1603	Plate-Stand
11050010	GS 15	Dispersing vessel, 25 ml
11050011	GS 25	Dispersing vessel, 90 ml
11050012	GS 40	Dispersing vessel, 300 ml

Further Accessories, Dispersing Aggregates, Drive Systems, Dispersing Vessels on request.



Choice of Dispersing Vessels

You know your application but you're not sure which dispersing system is the right one for you?

Then simply contact our application specialists who will assist you to find the best solution for you.

laboratory@kinematica.ch

Finest Solutions ... worldwide!

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 proved 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 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 for a personal demonstration of our POLYTRON® and MEGATRON® systems.

Dispersing Technology for the Laboratory
POLYTRON® Systems PT 1200 B/C/CL - Handheld Dispersers

KINEMATICA AG
Dispergier- und Mischtechnik

Dispersing Technology for the Laboratory
System POLYTRON® PT 3100

KINEMATICA AG
Dispergier- und Mischtechnik

Dispersing Technology for Laboratory and Pilot Plant
Batch and Inline Dispersing Equipment

KINEMATICA AG
Dispergier- und Mischtechnik

Homogenizing and Dispersing Technology
Inline and Batch Processing for Pilot Plant and Production

KINEMATICA AG
Dispergier- und Mischtechnik

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