

DATA SHEET

POLYTRON® PT 1300 D

Efficient sample preparation.

USERS / APPLICATION RANGES

- General homogenizing applications
- Dispersions, suspensions, and emulsions
- Dispersion of plant, animal and human tissue samples in various liquids and volumes
- Extraction of active pharmaceutical ingredients (API) in pills and tablets
- Sample preparation for medical diagnostics and RNA/DNA analysis
- Breakdown of animal and plant cells
- Emulsions and suspensions in tiny volumes
- Cell breakdowns for enzyme studies
- Preparation of samples for genetic studies
- Deagglomeration of cell complexes

This list provides a small selection of possible applications.

TECHNICAL INFORMATION

Processing volume (water)	0.05 up to 250 ml
Tip speed	Up to max. 14 m/s Up to max. 21 m/s (X-Aggregate)
Applicable aggregates	ø 3, 5, 7, 12 mm ø 20mm X-Design
Speed range	2000 to 30 000 rpm
Drive coupling	Aggregates with E coupling
Noise level (drive without aggregate)	65 dB(A) at 30 000 rpm
Motor	Brushless, maintenance-free
Drive power	100W
Connection voltage	90 - 230 V ± 10%, 50Hz / 60Hz
Relative humidity (max.)	80 % during storage 80 % during operation
Operating temperature	0 - 40 °C
PC interfaces	RS-232 (D SUB 9) USB socket B
Protection class acc. to DIN	IP 20
Dimensions (LxWxH)	Drive: 210x40x45mm Control module: 230x205x95mm
Weight	Drive: 620 g Control module: 1040g
EMC standards	IEC/EN 61000-6-2/EN 61000-6-3
Safety standard	IEC/EN 61010-2-51





EC «STANDARD DISPERSING AGGREGATE»

Design

The universal geometry uses two rows of teeth, is suitable for a large spectrum of laboratory applications, and it is reliable and efficient.

Selection and applications

- All standard dispersing tasks
- Grinding of animal and human tissue samples in a variety of fluids and volumes
- Sample preparation for the extraction and dissolution of organic materials
- Sample preparation for medical diagnostic procedures as well as DNA analysis
- Extractions of systems/substances from vegetable-derived samples
- Disruption of animal and human cells
- Deagglomeration of united cell structures
- Intensive mixing



SYN «SYNTHETICS»

Design

Disposable aggregates for the processing of multiple samples per day, where the required sterilization of stainless steel aggregates represents a significant time limitation. Available in PES / Special POM. Sterile packaging in packet sizes of 25 units each (ø 7 mm) and 10 units per packet (ø 12 mm) each.

Selection and applications

- Prevention of X contamination
- All standard dispersing applications similar to EC aggregate



B «BIOTRONA® HIGH-TURBULENCE MIXER»

Design

High-turbulence mixing head with the least possible shear forces and energy inputs.

Selection and applications

- Quick removal and suspension of solid particles; also suitable for high viscosity applications



M «OUTSIDE CUTTING BLADES»

Design

Outside blades pre-cut samples that are larger than the rotors diameter. Subsequently, they can be dispersed inside the generator.

Selection and applications

- Dispersing of large samples made simple
- All standard dispersing applications similar to EC aggregate



Z «Z-DESIGN»

Design

Breaking up of hard probes, with integrated V-notch technology. Additional, integrated holes for cleaning.

Selection and applications

- Hard and brittle material
- Sweet corn and grain
- Breaking, opening and dispersing of pills
- Breaking, hard grains



W «W-DESIGN»

Design

The W-design prevents fibrous, stringy or solid samples from clogging the rotor/stator.

Selection and applications

- Dispersing fibrous, stringy or solid samples (e.g., pieces of meat)
- All standard dispersing applications similar to EC aggregate



X «X-DESIGN»

Design

A special geometry designed for dispersing tablets and pills or for preventing suppositories from clogging or agglutinating.

Selection and applications

- Ultrafast crushing of tablets, coated pills, and suppositories
- Basis for the analysis of active pharmaceutical ingredients (APIs)
- Used in the substance analysis or for the quality control during the production of tablets