New Heatable jacketed process vessel
Transparent granulation vessel with agitator and chopper

Wet granulation of small quantities between 0.3 dm³ and 5 dm³ for Research & Development

Advantages, which speak for itself

- Compact and portable labscale high shear mixer
- cGMP conform design fulfills all guidelines (ATEX, FDA)
- Exact up-scale in comparison to production units
- Product contacting parts made of AISI 316 with polished finish
- Quick and simple exchangeable granulation vessels in different sizes of 1, 2, 4 and 6 litres with the appropriate agitator (exchange time < 1min)
- Single-walled or jacketed, heatable process vessels made of high grade stainless steel
- Transparent 1-litre-granulation vessel made of Polyacryl (option)
- Agitator and chopper top driven
- Process-optimized gap between vessel wall and agitator blades
- Convenient plug & play installation
- Process control, display and evaluation of all data via integrated touch screen Windows PC
- Current and trend curves of all critical process parameters
- Easy integration of NIR analyzing systems
- Extern data handling via USB port
- Easy and efficient cleaning
- Complete process documentation

Fields of Application

- Pharmaceutical and clinical samples
- Cosmetics and life science
- Chemical and fine chemical
- Food / feed / raw materials
- Ceramics, environmental technologies
- Pulvermetallurgie

Top Drive System

Transparent granulation vessel with agitator and chopper

- Rapid exchange of agitators and process vessels without any special tools
- No air sealings to the drives required
- Self-sealing process vessels - no product emission
- 1-litre-process vessel made of transparent polyacryl for an ongoing observation of the granulation process (option)

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Heatable jacketed process vessel

Universal labscale Top Drive Granulator TDG-Lab

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No air sealings to the drives required

Self-sealing process vessels - no product emission

1-litre-process vessel made of transparent polyacryl for an ongoing observation of the granulation process (option)
Modern touch screen operation panel with menu-guided control and evaluation software, easy data transfer via integrated USB connection

**Process vessels:**
- Nominal capacities: 1, 2, 4 und 6 dm³
- Material: Stainless steel AISI 316 L (standard)
- Transparent polyacryl (optional for the size 1 dm³ only)

**Agitator:**
- process optimized agitator blades in 4 sizes, suitable to the size of the process vessels
- Material: Stainless steel AISI 316 L

**Chopper:**
- 2 cranked blades, crosswise arranged
- Material: Stainless steel AISI 316 L

**Other parts:**
- Material: Stainless steel AISI 304
- FDA conform silicones and plastics

**Metallic surfaces:**
- product contacting surfaces: polished < Ra 0.3 µm
- exterior surfaces: ground < Ra 1.2 µm

**Mains connection:**
- 400 V / 3 Ph / 50 Hz (others upon request)

**Protection class:**
- drive assembly and unit control in non-Ex execution and IP 54.

**Control:**
- Programmable logical controller PLC (Mitsubishi) alternative
- Mini PC with touch screen (Beckhoff) with integrated operation system Windows CE
- Panel operations via display:
  - Agitator ON/OFF and preselection of rotation speed
  - Chopper ON/OFF and preselection of rotation speed
  - The granulation time is adjustable
  - Product temperature (°C) - optional
- Current and trend display of following parameters:
  - Agitator speed (r.p.m.)
  - Chopper speed (r.p.m.)
  - Product temperature (°C) - optional

**Further options:**
- Interface for external transfer of all relevant data (USB) incl. USB stick
- Torque recording via frequency inverter
- Measurement of product temperature
- Moveable stainless steel laboratory trolley

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