

MINI-PACTOR®

TECHNOLOGICAL BENEFITS

- ▶ Sophisticated real world calibration & protocols
- ▶ Qualified gap and force measurement
- ▶ Fully instrumented
- ▶ Constant ribbon density
- ▶ Easy scale up to production
- ▶ Perfect gap seal system
- ▶ Process data acquisition
- ▶ Free floating gap design
- ▶ Standard OEL < 3µg/m³

ADDITIONAL OPTIONS

- ▶ WIP cleaning
- ▶ Vacuum deaeration
- ▶ Different roller surfaces
- ▶ Press roller & mill cooling
- ▶ High containment solutions
- ▶ Built in PAT control system
- ▶ Integrated 2-step granulation system
- ▶ Separate feed funnel for small quantities
- ▶ Operator Interface with industrial PC solutions
- ▶ Advanced OEL Design < 1µg/m³

YOUR DRY GRANULATION EXPERTS

- ▶ Excellent isolator design
- ▶ Split valves on feed and discharge
- ▶ Excellence in ultra-high containment
- ▶ Realizing user specific machine configurations
- ▶ Close academic cooperation with various universities
- ▶ Conducting pharmaceutical roller compaction seminars
- ▶ Worldwide excellent technical and scientific support
- ▶ Validation documentation & support - CFR 21 Part 11
- ▶ PACTOR® applications for pharma-, food- & chemical industry
- ▶ Alternative configurations/Overall Design Solutions
- ▶ Setting the industry standard with the latest in dry granulation technology



DEVELOPMENT, PILOT PLANT, CLINICAL AND SMALL SCALE PRODUCTION – 10 GRAMS UP TO 100 kg/h

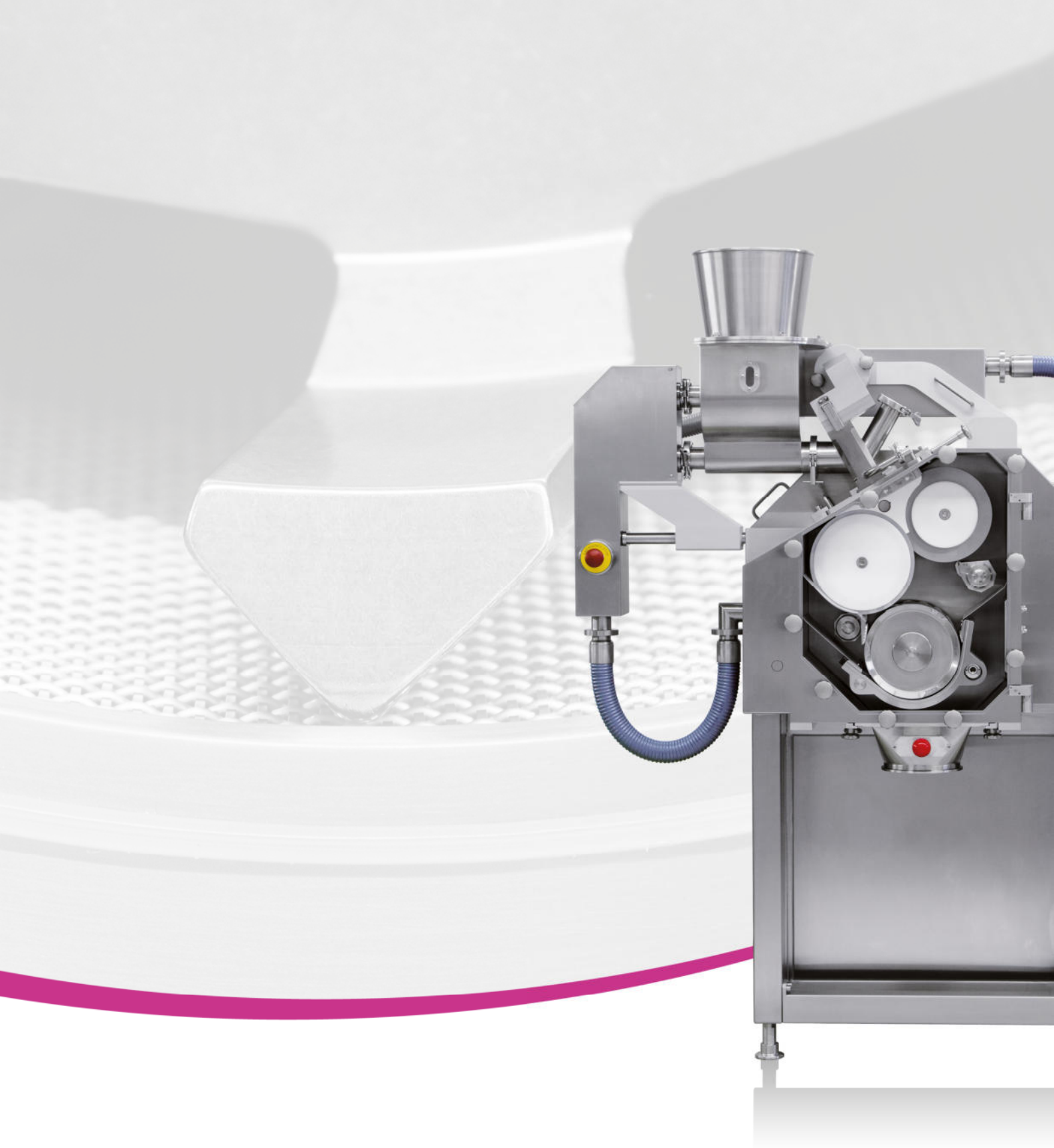
TECHNICAL DATA

PRESS FORCE	1-20 kN/cm
ROLLER SPEED	1-30 rpm
GAP	1-6 mm
WEIGHT	1200 kg



THE FASTEST WAY FROM THE IDEA TO THE MARKET





MACRO-PACTOR®

TECHNOLOGICAL BENEFITS

- ▶ Sophisticated real world calibration & protocols
- ▶ Qualified gap and force measurement
- ▶ Fully instrumented
- ▶ Constant ribbon density
- ▶ Easy scale up to production
- ▶ Perfect gap seal system
- ▶ Process data acquisition
- ▶ Free floating gap design
- ▶ Standard OEL < 3µg/m³

ADDITIONAL OPTIONS

- ▶ WIP/CIP
- ▶ Vacuum deaeration
- ▶ Different roller surfaces
- ▶ Press roller & mill cooling
- ▶ High containment solutions
- ▶ Built in PAT control system
- ▶ Separate feed funnel for small quantities
- ▶ Operator Interface with industrial PC solutions
- ▶ Advanced OEL Design < 1µg/m³

YOUR DRY GRANULATION EXPERTS

- ▶ Excellent isolator design
- ▶ Split valves on feed and discharge
- ▶ Excellence in ultra-high containment
- ▶ Realizing user specific machine configurations
- ▶ Close academic cooperation with various universities
- ▶ Conducting pharmaceutical roller compaction seminars
- ▶ Worldwide excellent technical and scientific support
- ▶ Providing complete, ready to use manufacturing units
- ▶ Validation documentation & support - CFR 21 Part 11
- ▶ PACTOR® applications for pharma-, food- & chemical industry
- ▶ Setting the industry standard with the latest in dry granulation technology



DEVELOPMENT, PILOT PLANT, CLINICAL AND FULL SCALE PRODUCTION – 100 GRAMS UP TO 400 kg/h

TECHNICAL DATA

PRESS FORCE	1-20 kN/cm
ROLLER SPEED	1-30 rpm
GAP	1-6 mm
WEIGHT	1700 kg



THE FASTEST WAY FROM THE IDEA TO THE MARKET





ULTRA-PACTOR®



GERTEIS
MASCHINEN + PROCESSENGINEERING AG

YOUR DRY GRANULATION EXPERTS

TECHNOLOGICAL BENEFITS

- ▶ Optimized safety for product and operator due to the latest containment technology
- ▶ Mock up tested and optimized handling procedure
- ▶ Online pressure monitoring for isolator and process containment
- ▶ Full validation package
- ▶ Push/push filter system
- ▶ Monitored fire wall seals
- ▶ Fully automated WIP/CIP cleaning
- ▶ RTP Port Ø 350

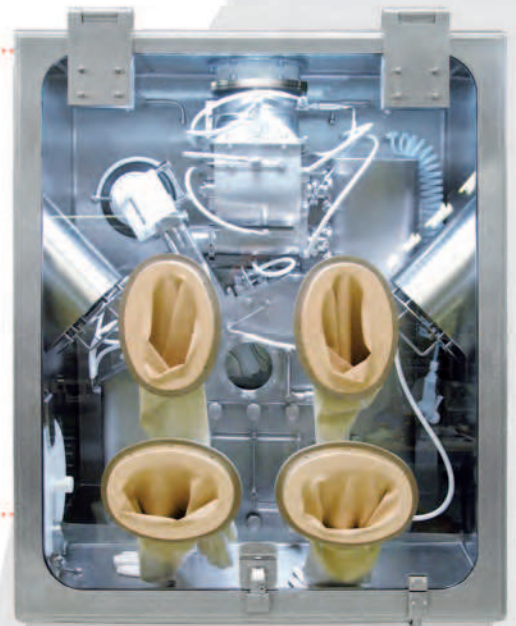
ADDITIONAL OPTIONS

- ▶ Different roller surfaces
- ▶ Different granulator designs
- ▶ Built in PAT control system
- ▶ MES interface
- ▶ Variable screen mesh sizes

YOUR DRY GRANULATION EXPERTS

- ▶ Excellent isolator design
- ▶ Split valves on feed and discharge
- ▶ Realizing user specific machine configurations
- ▶ Worldwide excellent technical and scientific support
- ▶ Close academic cooperation with various universities
- ▶ Conducting pharmaceutical roller compaction seminars
- ▶ Validation documentation & support - CFR 21 Part 11
- ▶ PACTOR® applications for pharma-, food- & chemical industry
- ▶ Setting the industry standard with the latest in dry granulation technology

ASK YOUR DRY GRANULATION EXPERTS FOR MORE DETAILS OR IN-HOUSE PRESENTATIONS



- ULTRA HIGH CONTAINMENT LEVEL DOWN TO 0.1 µg/m³
- FULL SCALE PRODUCTION UP TO 400 kg/h

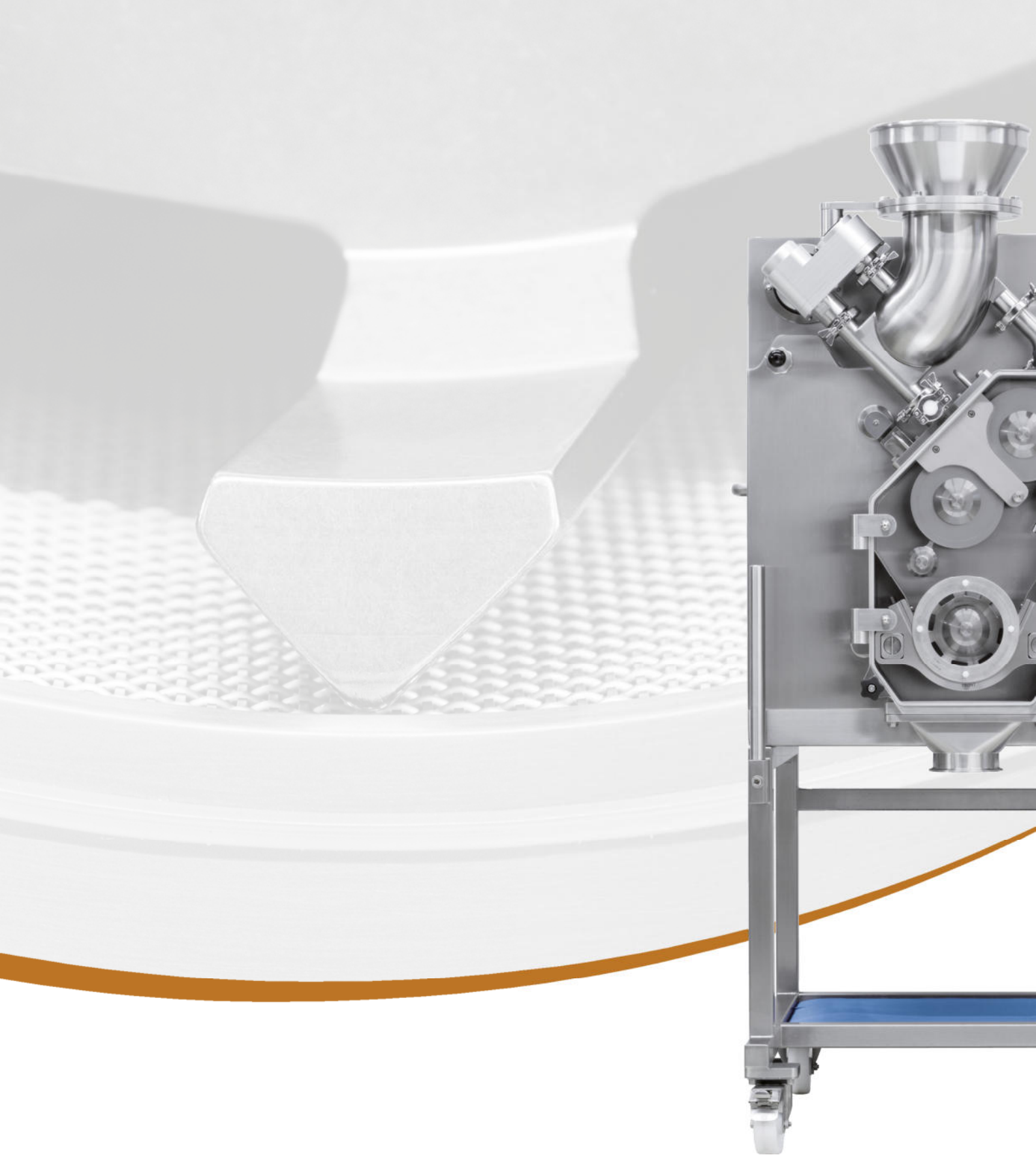
TECHNICAL DATA

PRESS FORCE	1-20 kN/cm
ROLLER SPEED	1-30 rpm
GAP	2-6 mm
WEIGHT	2500 kg



THE FASTEST WAY FROM THE IDEA TO THE MARKET





MINI-POLYGRAN®



YOUR DRY GRANULATION EXPERTS

MINI-POLYGRAN®

TECHNOLOGICAL BENEFITS

- ▶ New feeding system guarantees a constant powder feed per batch
- ▶ Virtually no excess heat with the GERTEIS® patented roller design
- ▶ Highly convenient placement within your facility
- ▶ Constant product quality and properties
- ▶ Reduced Parts for rapid cleaning procedures
- ▶ Validated force and gap measurement
- ▶ Longer dwell times due to the large roll diameter
- ▶ Easy scale-up to production batches
- ▶ Ideal for pharmaceutical, food and chemical laboratories
- ▶ For development, pilot plant, clinical and small scale production

ADDITIONAL OPTIONS

- ▶ Advanced OEL Design <5 µg/m³
- ▶ Wash-in-place cleaning
- ▶ Different roller surfaces, optimized for your product
- ▶ Integrated two-step granulation system

YOUR DRY GRANULATION EXPERTS

- ▶ Technical centers for conducting test trials
- ▶ Application know-how for pharma, food and fine chemicals
- ▶ Realizing user specific machine configurations
- ▶ Close academic cooperation with various universities
- ▶ Conducting pharmaceutical roller compaction seminars
- ▶ Excellent worldwide technical and scientific support
- ▶ Validation documentation & support - CFR 21 Part 11
- ▶ Alternative configurations / overall design solutions
- ▶ POLYGRAN® applications for the pharmaceutical-, food- & chemical industry
- ▶ Constantly setting industry standards with the latest in dry granulation technology



DEVELOPMENT, PILOT PLANT, CLINICAL AND SMALL SCALE PRODUCTION - 10 g PER TRIAL UP TO 50 kg/h.

TECHNICAL DATA

PRESS FORCE	1 - 15 kN/cm
ROLLER SPEED	0.5 - 10 rpm
GAP	1 - 4 mm
WEIGHT	500 kg



THE FASTEST **WAY** FROM THE **IDEA** TO THE **MARKET**



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POLYGRAN®

TECHNOLOGICAL BENEFITS

- ▶ Validated gap and force measurement
- ▶ Fully instrumented
- ▶ Easy scale-up to production
- ▶ Perfect gap seal system
- ▶ Process data acquisition
- ▶ Variable gap design
- ▶ Easy assembly due to reduced interchangeable parts
- ▶ Advanced feeding hopper design for all process requirements
- ▶ Adjustable screen clearance to optimize particle size distribution

ADDITIONAL OPTIONS

- ▶ Different roller surfaces
- ▶ Variable screen mesh sizes
- ▶ Operator interface with touch screen panel
- ▶ Recipe management
- ▶ Process data archiving
- ▶ CFR 21 Part 11 compliancy
- ▶ OPC-Connection
- ▶ Integrated 2-step granulation system

YOUR DRY GRANULATION EXPERTS

- ▶ Realizing user specific machine configurations
- ▶ Worldwide excellent technical and scientific support
- ▶ Close academic cooperation with various universities
- ▶ Conducting pharmaceutical roller compaction seminars
- ▶ Providing complete, ready to use manufacturing units
- ▶ Validation documentation & support
- ▶ PACTOR® applications for pharma-, food- & chemical industry
- ▶ Setting the industry standard with the latest in dry granulation technology

EXCELLENT VALUE FOR MONEY!



DEVELOPMENT, PILOT PLANT, CLINICAL AND FULL SCALE PRODUCTION – 500 GRAMS UP TO 300 kg/h

TECHNICAL DATA

PRESS FORCE	1-15 kN/cm
ROLLER SPEED	2-20 rpm
GAP	2-5 mm
WEIGHT	1200 kg



THE FASTEST WAY FROM THE IDEA TO THE MARKET

