Rotary Drum Granulator

- Phosphate Fertilizer, Potash Fertilizer Processing
- NPK Compound Fertilizer
- Organic Fertilizer
- Organic inorganic compound fertilizer
- BB fertilizer production line
- Slow and controlled release fertilizer
- Liquid Fertilizer
- Composting fertilizer
- Mineral powder granulation
- Municipal waste treatment, sludge treatment
- SOP Production Line
- Cat Litter Granulation Production Line

Rotary Drum Granulator Product Overview

We offer various configurations to suit your fertilizer processing needs, whether organic, or inorganic.

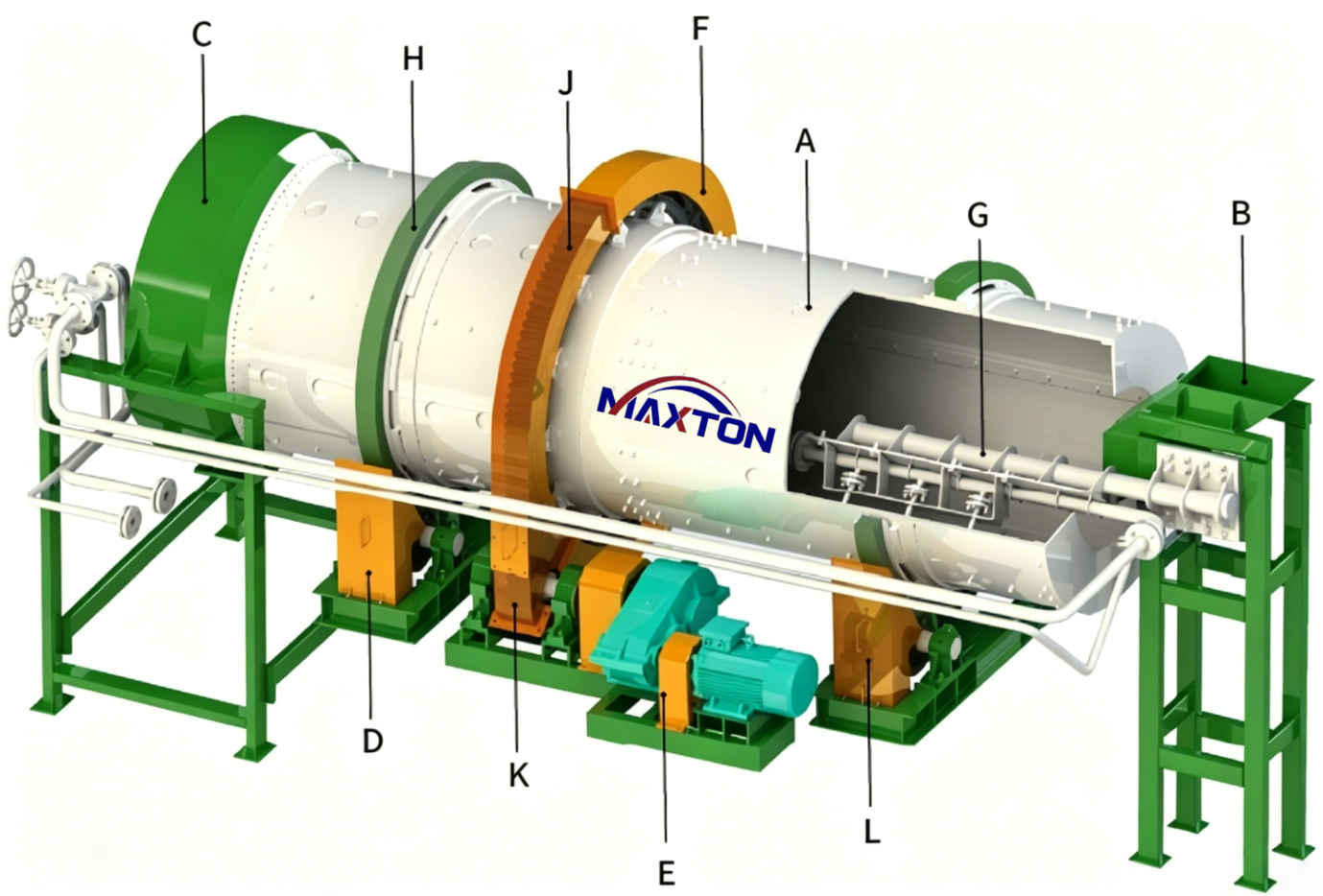
Granulation drums work by tumbling material in a rotating drum, typically in the presence of a binder. The binder causes the fines to become tacky and allows them to pick up additional fines, forming agglomerates in a process referred to as coalescence. The tumbling action helps to round the agglomerates and create a homogeneous mixture.

Granulation drums are frequently used in fertilizer production, when agglomeration must be combined with a chemical reaction.

Rotary Drum Granulator Advantages:

- ✅ **High Granulation Rate:** High sphericity, round and uniform granules
- ✅ **Low Energy Consumption:** More energy-efficient compared to other granulation methods
- ✅ **Strong Adaptability:** Handles various materials, supports wet granulation and chemical reaction granulation
- **Easy Operation:** Stable operation, high degree of automation
- ✅ **Convenient Maintenance:** Reliable structure, few vulnerable parts

Product Details



A – Cylinder

B – Feeding device

C – Discharging device

D – Support wheel assembly

E – Transmission

F – Protecting cover

G – Spray pipe assembly

H – Rolling ring

J – Big gear

K – Pinion

L – Supporting wheel

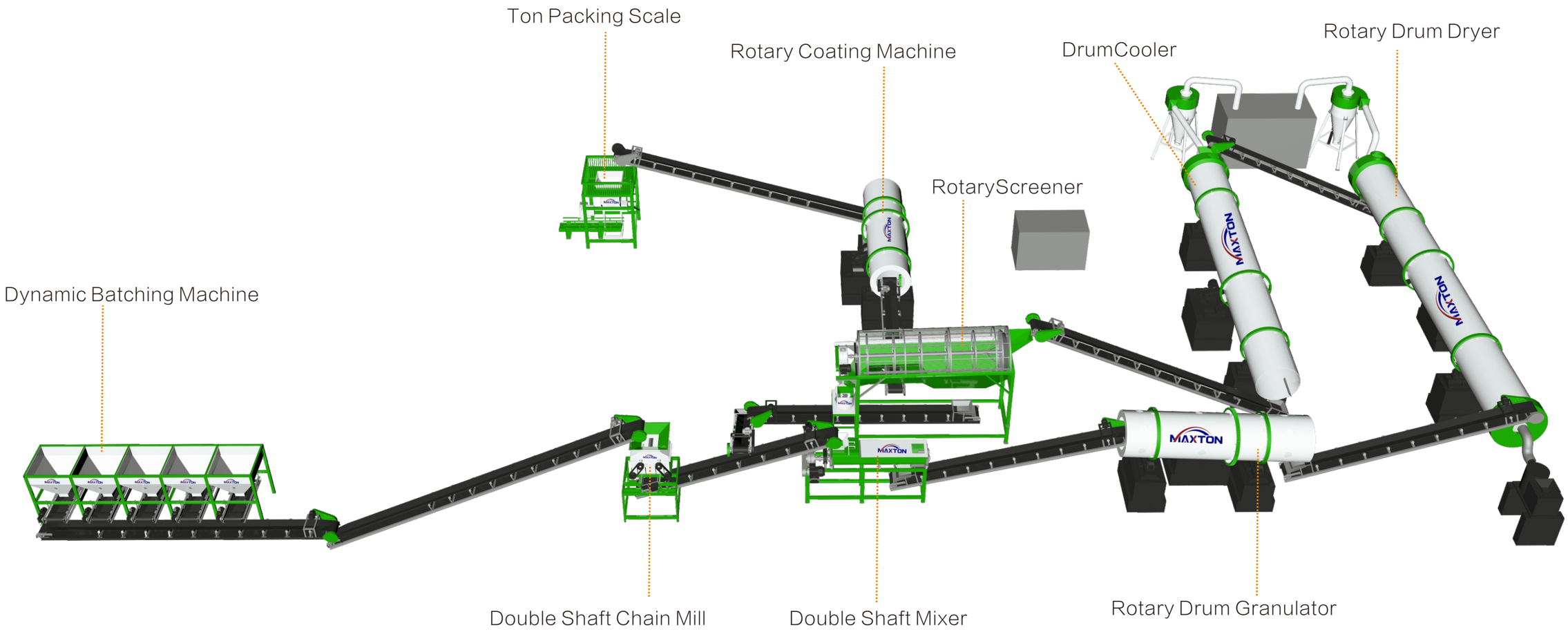
Technical Specifications

Model	Inner Diameter (mm)	Drum Speed (r/min)	Capacity (t/h)	Motor Power (kW)	Weight (t)
Φ0.8×3.0	800	20.0	0.5 – 1.5	1.1	2
Φ1.0×3.0	1000	17.0	1.0 – 3.0	3	4
Φ1.2×4.0	1200	16.0	2.0 – 5.0	5.5	7
Φ1.5×5.0	1500	15.0	5.0 – 10.0	11	14
Φ1.8×6.0	1800	14.0	8.0 – 15.0	18.5	26
Φ2.4×6.0	2400	13.0	15.0 – 25.0	45	58
Φ3.0×7.0	3000	11.0	25.0 – 45.0	90	95
Φ3.6×8.0	3600	10.0	40.0 – 65.0	160	135
Φ4.5×8.0	4500	8.0	30.0 – 90.0	280	180

For specific parameters, design drawings and material-based customized quotes, please contact MAXTON engineers or browse full cases on our official website.

Complete Drum Granulation Production Line

A standard turnkey fertilizer production plant includes the following core stages — from raw material batching through to finished product packaging.



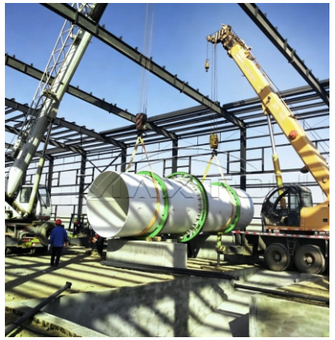
General Process Flow

Raw Material Batching → Crushing & Pretreatment → Mixing → Granulation → Drying → Cooling → Screening & Recycling → Surface Coating → Bagging

Customer Site






FAQ

Q1: What core data is required to engineer a custom rotary drum granulator?

Drum granulator design is fully data-driven. We need full raw material data, finished product specs and on-site process parameters. Key design data is verified via professional material tests at our innovation center.

Q2: How is retention time inside a rotary drum granulator determined?

- Retention time varies 30s-60 mins by process needs. It decides drum L/D ratio and affects granule compactness and reaction sufficiency.
- MAXTON confirms the best retention time via pre-tests based on material flow, binder activity and required granule hardness.
- Related core questions: drum L/D ratio, retention time influence on granule densification, target granule hardness.

Q3: What are the high-frequency wear parts, and how do you perform predictive maintenance?

- Key wearing parts cover anti-corrosion lining, lifting plates, supporting rollers, riding rings and thrust rollers.
- Accurate drum alignment is essential for maintenance. Misalignment causes severe abrasion to core components. We offer professional laser alignment and regular inspection to prolong equipment service life.

Q4: What are typical wear parts?

Answer: Liners, lifting flights, trunnion wheels, tires, and thrust rollers.Drum alignment is critical; misalignment accelerates wear on these components.

Q5: How to prevent caking in drum granulator?

Answer: Excess moisture, improper temperature and wrong operation parameters mainly cause caking.Solutions: Use self-cleaning accessories, control water addition, adjust speed & tilt, boost cooling and add anti-caking agents.

Q6: What auxiliary equipment is needed for a Rotary Drum Granulator?

Answer: Typically requires feed and discharge systems, screening and recycle systems (to return off-spec granules back to the process).A dryer is usually installed downstream, and sometimes a mixer is installed upstream to ensure uniform feedstock.

About Maxton

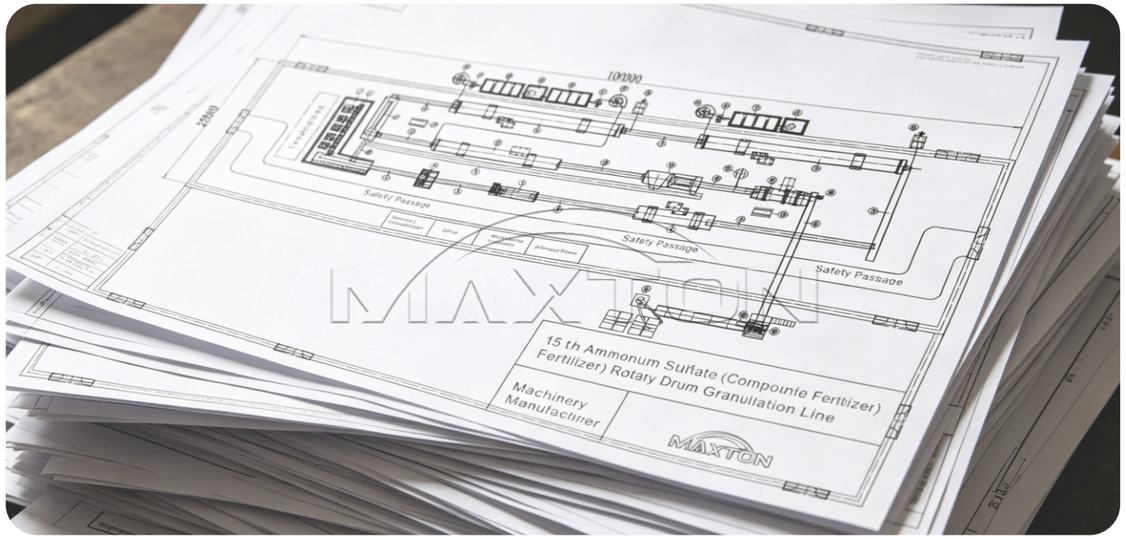
HENAN MAXTON MACHINERY CO., LTD is a process design and equipment manufacturing enterprise. Over the years, **we have been dedicated to supplying solutions and equipment for the granulation, drying, cooling and conveying of various materials, with a particular focus on the fertilizer production industry.**

- CE Certificate Verification
- ISO 9001 Quality Certification
- China Compulsory Certification
- SGS Certificate Verification
- CNAS Certificate Verification
- TÜV Certificate Verification

Certified by SGS to ISO 9001:2015 standards.

Engineering & Manufacturing Capabilities

With our comprehensive front-end engineering capabilities, we support you through every phase of your project, including the following services:



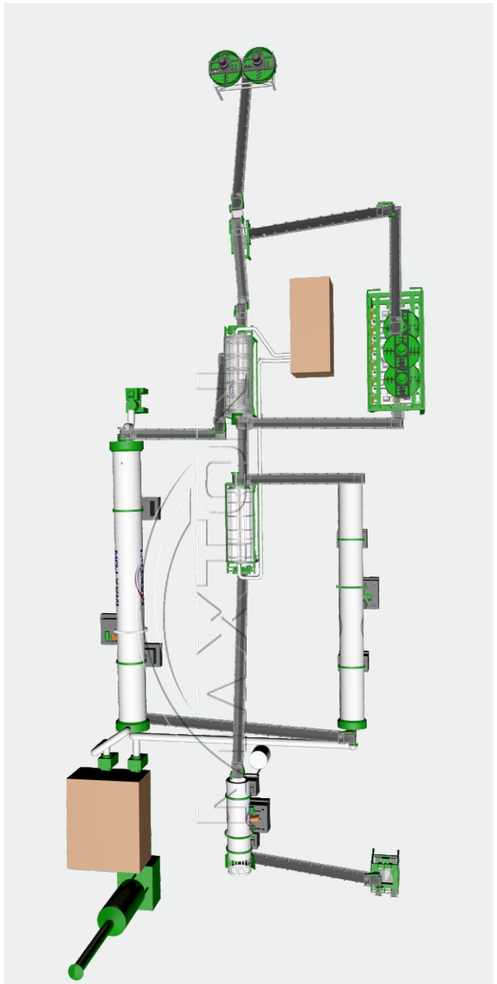
- Equipment design and fabrication
- Process Flow Diagrams (PFD)
- 3D conceptual plant layouts
- Plant general arrangement drawings
- Civil works drawings with static/dynamic load data
- Structural steel and access platform design drawings
- Chute and ductwork drawings
- Piping and Instrumentation Diagrams (P&ID)
- Electrical & control system engineering
- Installation and commissioning
- On-site installation and start-up supervision

Engineering & Manufacturing Capabilities

- Guided by the spirit of "Your Most Devoted Partner"
- 48-hour response to complaints
- Dispute handling: solve first, minimize losses
- Proactive product issue resolution
- Technical training & anytime consulting
- Full customer tracking: warranty, maintenance & quality improvement

One-Stop Procurement For Full Range Fertilizer Production Lines

We provide multi-specification solutions covering disc, rotary drum and extrusion granulation lines as well as fertilizer production stations to satisfy diverse equipment and raw material demands.



*The above application scenarios are only partial.

Double Roller Press Granulator

NewType Organic Fertilizer Granulator

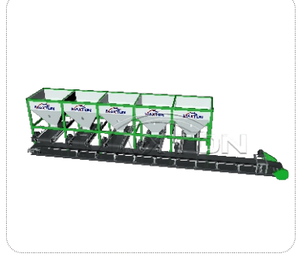
Internal-External Rotary Drum Granulator

Disc Granulator

Flat Die Pellet Machine

Double Shaft Chain Mill

vertical Crusher



Dynamic Batching Machine

Loader Type Feeder

Trough Type Flipping Machine

Vertical Fermentation Tank

Drum Composting Machine

Rotary Screener

Double ShaftMixer

Drum Cooler

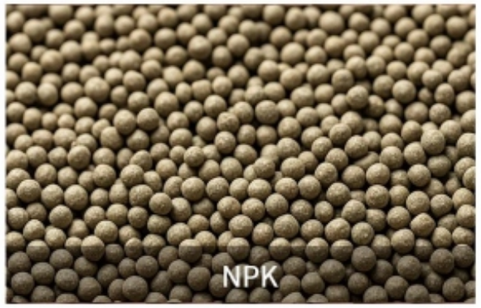
Fertilizer Polishing Machine

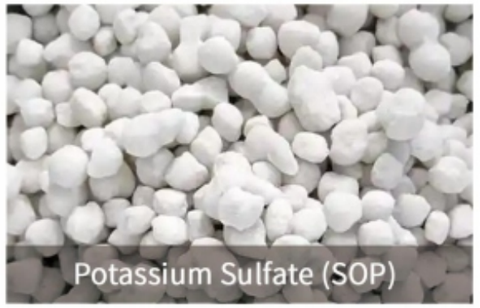
Single Bucket Packing Scale

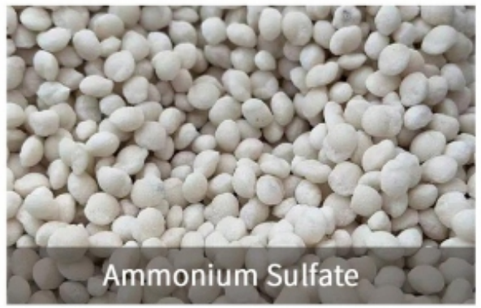
Palletizing machine

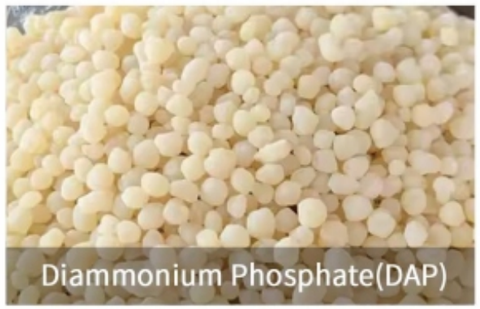
Unmatched Expertise

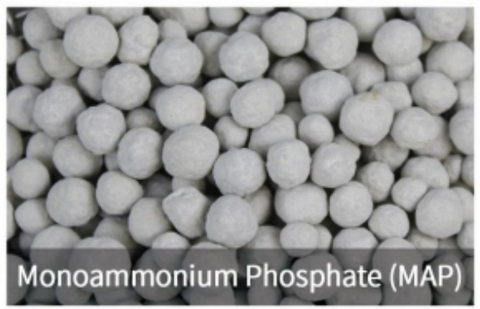
MAXTON has worked with hundreds of materials and their derivatives, giving us a unique, high-level perspective on material processing for both new and traditional applications.











Common Material Granulation

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