organic waste solutions
Doda offers organic waste solutions by manufacturing a broad variety of products in the industrial, agricultural and municipal solid waste industries, such as:

- Bio-Separators
- Anaerobic Digester Mixers
- Rotary Sludge Thickeners
- Centrifugal Chopper Pumps
- Screw Separators
- Roller Separators
- & More

Doda uses state-of-the-art manufacturing equipment in compliance with the strictest anti-pollution rules alongside the most advanced computer generated two- and three-dimensional CAD drawings to design, manufacture and provide solutions over a broad spectrum of applications.

Doda’s engineering know-how, and proven successful experience gained over half a century and hundreds of turnkey projects, enables Doda to offer custom solutions in the organic waste industry with strict adherence to cost/benefit advantages.
Decomposition of food and other organic waste in landfills account for 34 percent of all methane emissions. Methane is a greenhouse gas 21 times more damaging to the environment than carbon dioxide. The United States generate about 35 million tons of food waste annually. Doda offers various sizes of bio separators for separating food and other organic waste from the waste stream.
Organic and Non-Organic Bio Separators

- Reinforced AISI 304 stainless steel construction
- Hardox steel hammer mill
- Hot galvanized screens with 3/8" or 5/8" hole sizes
- Various models with throughput ranging from 2-20 ton per hour of comingled organic and non-organic waste

Bio Separator Advantages

- Very robust with up to 20 ton per hour throughput of comingled non-organics and food waste
- Up to 99% removal of non-organics from food waste depending on product and screen size
- Reducing GHG (methane) emissions from landfills and waste combustion
- Improved sanitation, public safety and health for both your facility and community.

Bio Separator Applications

- Dry systems with hopper sizes of 250 or 2,500 US gallons
- Wet system bag openers and specially designed chopper pumps for mixing and feeding
- In-store hand-fed compact units for de-packaging, separation and volume reduction
- Volume reduction for transport and tipping fee savings
- Recycled food waste can be used as compost for fertilizer replacement
- Creation of an anaerobic digester feed stream with high methane production potential
- Low maintenance
- Turnkey projects, from design to startup.

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Effective mixing of the anaerobic digester contents is important for process stability, maximizing gas production, minimizing scum and foam formation, and preventing solids deposition in the digester, which can reduce the active volume of the digester and result in expensive removal costs.
Anaerobic Digester Mixers

- Entirely manufactured in AISI 304 stainless steel
- Adjustable angle driveline with options of roof or side mounting available
- High efficiency three-blade slow-turning 80 rpm 60” or 500 rpm 18” diameter propellers
- Reinforced oil bath driveline with tungsten carbide mechanical seal system
- 5-22 kW c-face explosion-proof high efficiency motors
- Up to 40,000 hours maintenance schedule
- Removable under full load roof and side mounted mixers are available on request

Advantages

- Customizable and can be retrofitted to any existing or new digesters
- Mix a large volume of product
- Minimize scum and foam formation
- Minimize the deposition of grit and solids on the digester floor
- Uniformed distribution of solids throughout the digester
- Prevents thermally stratified sludge layers
- More stable digestion process
- Higher gas production
Doda Distribution Box

Doda offers a unique solution to solve the most complex slurry mixing and transfer applications. The Doda distribution boxes are custom manufactured and equipped with a single stainless steel Doda vertical chopper pump and customizable flange system.

- Manufactured in 3/8" (10 mm) thick AISI 304 stainless steel
- Customized to order and customer specification
- Rated to 45 psi or 100 feet head pressure
- Customized pump flow rate and horsepower per customer requirements

Advantages

- Cost savings (one pump can perform the duties of several)
- Smaller footprint
- More flexibility with essentially unlimited combination possibilities

Distribution Box

Bio Separator
Biogas Accessories and Complementary Items

Doda manufactures and offers a wide range of custom accessories and complementary items. All items are made using state of the art manufacturing equipment in compliance with the strictest anti-pollution rules and strict adherence to international standards.

- Digester tank inspection windows
- Custom stainless steel piping
- Custom pipe connectors and valve
- Custom reception pit lids
Solids dewatering focuses on liquid reduction while providing safe handling and disposal of residuals at a wastewater treatment facility. Slurries contain free liquid and bound liquid. Sedimentation, stationary and moving screens can only remove some of the free liquid and none of the bonded liquid and are only effective with extremely diluted wastes, which complicate the problem. Doda screw and roller separators accomplish solids separation by squeezing out all of the free liquid plus some of the bound liquid.
**Doda Screw Separator**

With its compact design, easy installation and simple to maintain features the Doda screw press separator is an excellent machine for the separation of suspended solids from liquids and sludges.

- Completely AISI 304 stainless steel with removable access covers for inspection and cleaning
- Heavy duty planetary gearbox powered by a local 15 hp USA high efficiency motor
- 390 mm HD stainless steel screens allow for rotation between front and back screen
- HD stainless steel casted augers with highly abrasion-resistant ceramic coating
- Seven vanadium blade internal chopping system
- Versatile intake design to be loaded from top or side
- Adjustable discharge door for moisture content up to 40% dry product
- Dual seals with automatic greasers to protect gearbox
- Product detector sensor for automatic start and shutdown

**Advantages**

- Separates into dry drip-free manageable solids for easy stacking and transport
- Reduce odor in solids and increases storage capacity
- Less sedimentation for improved aerobic process in lagoon
- Less maintenance and longer lagoon operation before cleaning
- Suitable for compost or green bedding for dairy industry

**Applications**

- Biogas industry
- Agriculture
- Food processing industry
- Pulp and paper industry
- Abattoirs and meat processing industry
The roller separator provides a highly efficient and reliable system for the separation of the slurry liquid fraction from the solid one by using a combination of a rotating drum with adjustable compression rollers.
**Doda Roller Separator**

The roller separator provides a highly efficient and reliable system for the separation of the slurry liquid fraction from the solid one by using a combination of a rotating drum with adjustable compression rollers.

- Completely 304 stainless steel with hydraulic adjustable high-resistance pressure rollers
- Large surface screen for up to 60 m$^3$/h throughput
- Self-cleaning wire brush and washing system
- Low power consumption 1.5 hp electric motor
- Over pressure regulator tower and stone trap
- Product detector sensor for automatic start
- Sealed SKF bearings

**Advantages**

- Fast reliable separator to separate a high volume of fibrous product with up to 60 m$^3$/h
- Separates into dry drip-free manageable solids for easy stacking and transport
- Compost

**Applications**

- Biogas industry
- Agriculture
- Food processing industry
Doda rotary separator is ideal for industrial applications where a high volume of slurry with relatively low solid content needs to be screened. The rotary screen allows the liquid fraction to pass through the screen by gravitational forces and by using an Archimedes style screw conveys the solids trapped in the screen to the opposite end for additional treatment. The optional Doda compactor can be mounted to squeeze out additional liquids from the slurry for up to a 28% dry solid consistency.

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Doda Sludge Thickener with Compactor (Rotary Separator)

**Advantages**
- High volume throughput of up to 30,000 US gal/hour
- 100% stainless steel is essentially corrosion and rust proof
- Double cleaning system to prevent clogging of screens
- Two different screen sizes can be mounted in single machine
- No belt drive, heavy duty poly (Akulon) gear allows for maintenance free operation
- Compactor allows for consistent trouble-free dry product unlike the conventional solid roller presses

**Applications**
- Biogas industry to thicken the waste stream before feeding into the digester
- De-packaging and cleaning of non-organic waste before landfill
- Flushing and sand bedding dairies
Centrifugal Pumps

The unique design of the Doda centrifugal pump housing and patented chopper blades makes the Doda pump a true leader in the field of pumping highly fibrous sludge and slurry. The high speed open design impeller combined with the two static and rotating chopper blade handles the most challenging solids.

Doda Vertical Chopper Pumps

- Hot dipped galvanized nodular cast iron or AISI 304 stainless steel
- Oil bath driveline with separate pump housing stainless steel shaft
- Two piece tungsten carbide seal system
- Agitation nozzle with 320 degree horizontal and 90 degree vertical movement
- Patented chopping system with two static blades and one rotating chopper blade
- High speed impeller with adjustable pressure plate for secondary chopping
- Nodular cast iron housing, no welded components with unique volute design
- Electric, PTO and models with additional propeller agitator are available
- Selection of mounting brackets and undercarriages for varying applications

Advantages

- Rotating chopping feature and adjustable pressure plate assures proper conditioning
- The unique pump housing and volute design accelerates product moving through the housing and prevent clogging
- Operates close to best efficiency point with minimal shaft deflection and increased performance of the mechanical seals and pump bearings

Applications

- Water
- Sewage
- Petroleum
- Petrochemical
- Dairy and hog manure

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Doda Horizontal High Pressure Chopper Pumps (AFI)

- Nodular cast iron housing, not welded
- Vanadium and manganese alloy chopper blades
- Adjustable pressure plate and special impeller for secondary copping
- Pedestal models set up for direct power source (electric, diesel, hydraulic)
- Heavy duty gearbox available in 540 and 1,000 rpm for PTO pumps
- Internal check valve on suction cone allowing startup without re-priming
- Vertical head pressure of up to 450 ft or 200 psi
- Can be set up as vertical pumps

Advantages

- Unsurpassed in durability and longevity
- Open impeller design prevents clogging
- User-friendly and low maintenance
- HD models available for heavy-extended use
Doda manufactures a variety of propeller mixers suited for the most challenging applications. The unique self-cleaning propeller is design for where the treated mass must be kept in a homogeneous state without dispersing the characteristic gasses used for biogas.
Storage tank, Slurry Pit and Lagoon Mixers (Movred)

**Advantages**
- Customizable with various mounting options
- No cables and no special electrical motor required
- Very low maintenance

**Applications**
- Biogas industry
- Dairy and hog industry

- Entirely hot galvanized or stainless steel structure
- Oil bath transmission and driveline
- Widia-Widia mechanical seal
- Oversized reduction gearbox in relation to actual power
- Stainless steel propeller support shaft
- Self-cleaning three-blade propeller
- Customizable for special requirements