



DUROMECH[®]
control focused - technology driven

PRESENTATION ON DUROMECH'S DISC SCREEN

THAPAR ENGINEERING WORKS

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company profile

DUROMECH is a leader in solid waste management equipment , delivering advanced systems and equipment to meet the industry's growing recycling needs. Since 1981, Duromech (Thapar Engineering Works) has led India's waste management machinery industry, specializing in Refuse Derived Fuel Processing Plant, Alternate Fuel Recovery Facility, Solid Waste Processing Unit that enhance sustainability and efficiency.

Our advanced technology and commitment to a greener future drive us to reduce waste and transform industries.

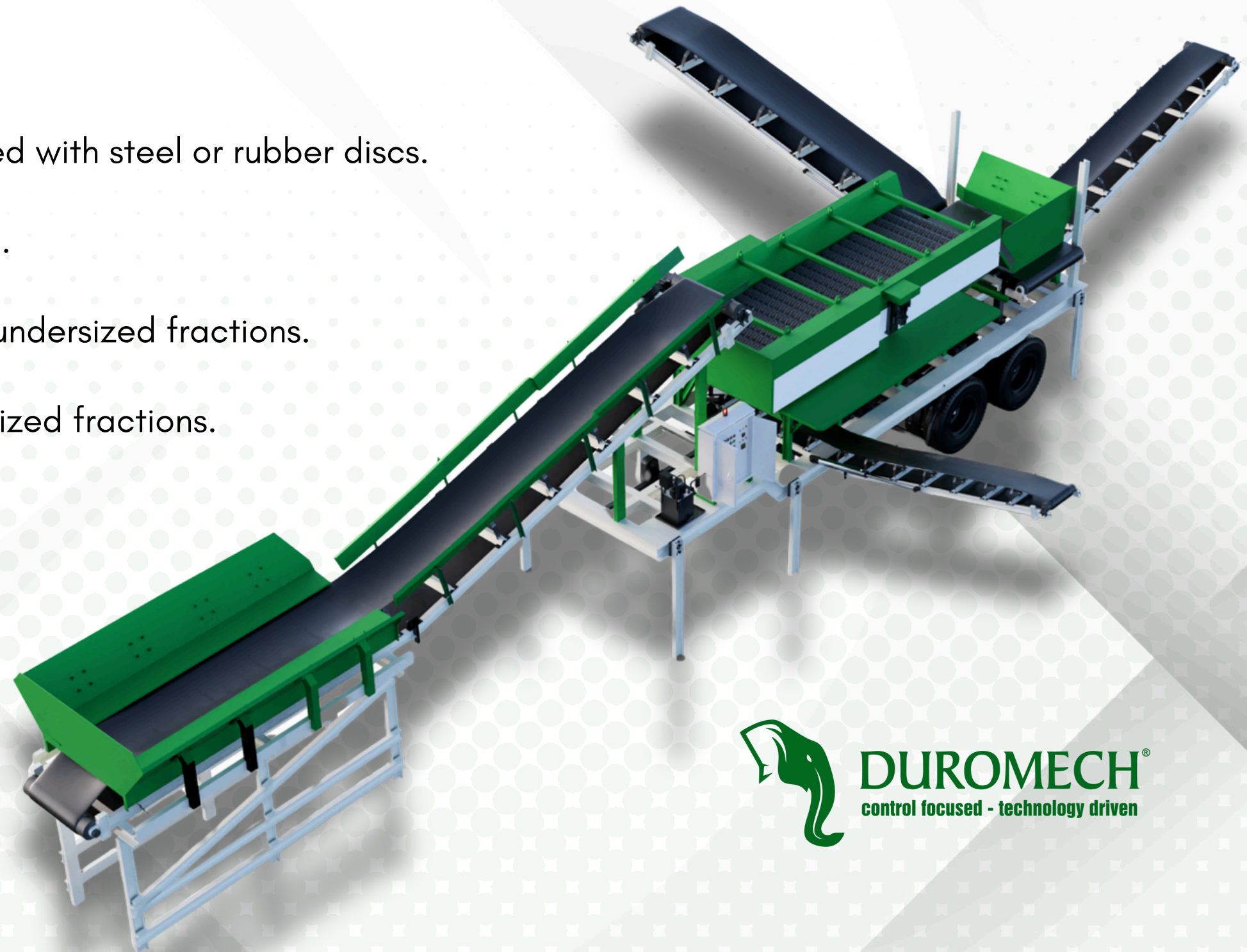
Our experienced design team will work directly with you to customize your Recycling System to suit your particular needs.

- **Proven Experience** – 30+ years in waste processing & recycling solutions.
- **Advanced Technology** – Trommel Screens, Disc Screens , Ballistic Separators, ADS (Air Density Separator), Conveyors built to global standards.
- **Custom Solutions** – Machines designed for Municipal Solid Waste, Refuse Derived Fuel, Construction & Demolition waste.
- **Strong & Reliable** – Heavy-duty, low-maintenance equipment for long life.
- **Complete Solution** – From design to Installation, Training & After – Sales Services.



DUROMECH's DISC SCREEN

- A Disc Screen is a solid waste sorting machine used for separating waste materials based on size.
- It uses rotating discs mounted on parallel shafts to efficiently screen and separate materials into multiple fractions.
- The primary separation method is mechanical screening — an essential process in waste sorting lines to divide mixed waste into distinct streams without manual intervention.
- The machine consists of multiple parallel rotating shafts, each mounted with steel or rubber discs.
- The rotation of discs causes the material to tumble and move forward.
- Materials smaller than the spacing between the discs fall through as undersized fractions.
- Larger and rigid materials travel across the top of the screen as oversized fractions.



TYPES OF WASTE THAT CAN BE SCREENED

- Plastic Waste
- Municipal Solid Waste (MSW)
- Refuse-Derived Fuel (RDF) Feedstock
- Paper & Cardboard
- Compost / Organic Waste



WORKING PRINCIPLE OF DUROMECH DISC SCREEN

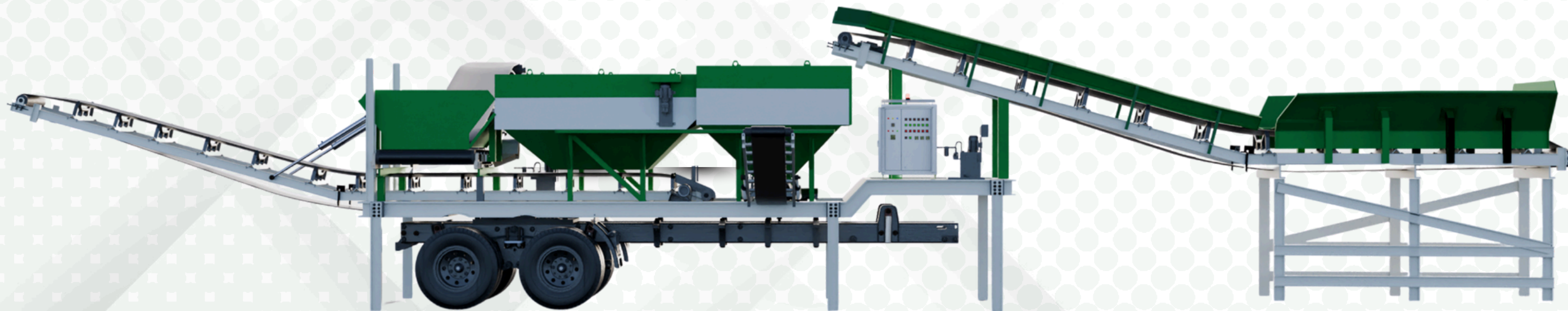
The Disc Screen uses a series of rotating discs mounted on shafts to separate waste materials.

As material flows across the screen:

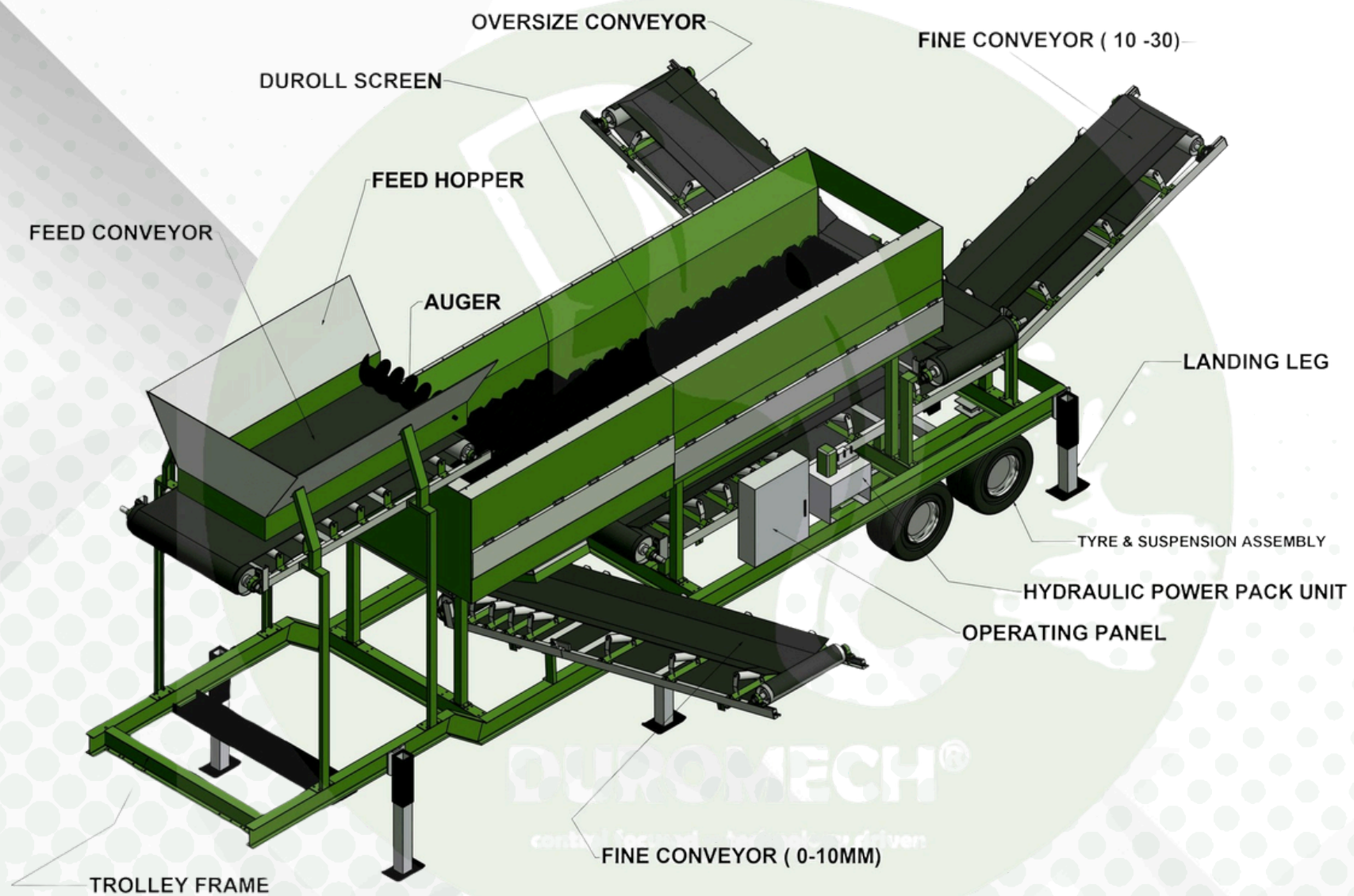
- Smaller fractions fall through the gaps between the discs.
- Larger fractions are carried forward for further processing.
- The continuous rotation prevents clogging and ensures smooth material flow.

SEPARATION OUTPUT

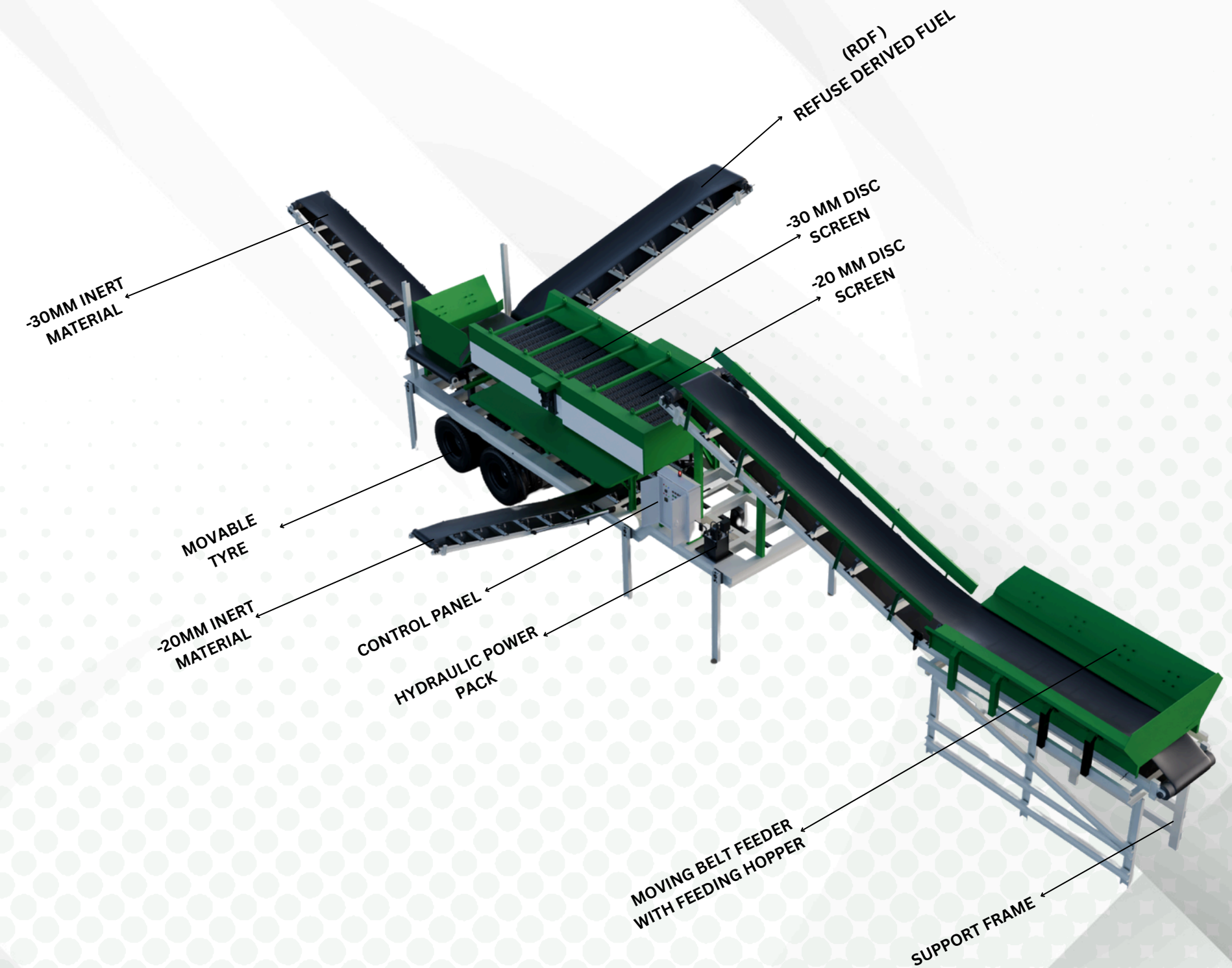
- Oversized Fraction (3D)
- Flat / Lightweight Fraction (2D)
- Fines (Below screen fraction)



DISC SCREEN KEY PARTS & COMPONENTS



Capable of sorting
waste up to 250 TPH



PARTS & COMPONENTS DESCRIPTION

INFEED CONVEYOR

- Delivers mixed waste uniformly to the disc screen.
- Belt or chain conveyor options available.

ROTATING DISC SHAFTS

- Multiple parallel shafts with rotating discs.
- Primary screening element for separation by size.

DISC (STEEL/ RUBBER)

- Material: Wear-resistant steel or heavy-duty rubber.
- Designed for long life and optimal screening performance.

DRIVE UNIT/MOTOR

- Powers disc rotation.
- Electric motor with belt drive or gearbox.



PARTS & COMPONENTS DESCRIPTION

FRAME & BASE STRUCTURE

- Heavy-duty structure for stability.
- Anti-vibration design.

OUTPUT CHUTES

- Direct oversized, undersized, and fine fractions to conveyors.

CONTROL PANEL

- Controls motor speed, start/stop, and safety interlocks.

SAFTY GUARDS & COVERS

- Protects operators and ensures safe operation.
- Dust control integration possible.



KEY FEATURES OF DISC SCREEN



- Continuous, Non- Clogging Operation
- Durable Disc Construction
- Easy Maintenance Access
- Versatile Screening
- Improved Quality of Output
- High Throughput Capacity

BENEFITS OF USING DISC SCREENS

- Efficient separation of various waste fractions
- Low energy consumption
- Minimal maintenance
- Compact design — space-saving
- Automated screening reduces labor
- Enhanced RDF quality and recyclables recovery
- Reliable, consistent operation

PRODUCT VIDEO LINK



Duomech Disc Screen

OUR COMMITMENT TO EXCELLENCE

We are committed to delivering high-quality Disc Screens tailored to the needs of modern waste processing plants.

Engineered with advanced technology and rugged construction, our disc screens ensure high throughput, low maintenance, and optimized material recovery. We offer end-to-end support — from consultation and design to installation and after-sales service.



Our Certifications

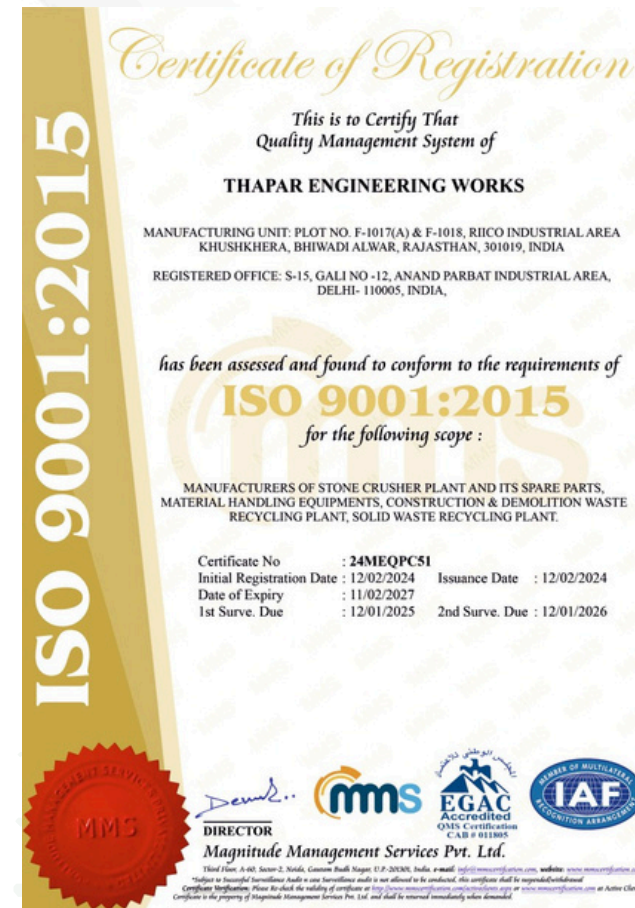
We are a certified organization, committed to delivering excellence, sustainability, and safety.

Advantages of Air Density Separator

ISO 9001:2015: Ensuring consistent quality and customer satisfaction

ISO 14001:2015: Focused on environmental responsibility and sustainable practices

ISO 45001:2018: Prioritizing health and safety in every operation



THAPAR ENGINEERING WORKS

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THANK YOU!

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