

## Vecoplan - Our History



Vecoplan was founded in 1969 in Bad Marienberg, Germany as a manufacturer of high quality wood chippers.

In the early 1980's, Vecoplan's focus turned to manufacturing innovative machinery for recycling of various materials, inspiring the invention of the first single-shaft rotary grinder the

world had ever seen. This innovation has revolutionized the size reduction industry.

In 1989, a European patent was awarded to Vecoplan for the single-shaft grinder and its unique "U-rotor". To this day, this rotor design remains the most advanced cutting geometry available for the universal size reduction of a broad spectrum of waste materials.

In 1994 Vecoplan received its **ISO 9001** certification. This is the highest standard set for quality assurance and confirms the company's dedication to innovative product development, design, engineering, high quality manufacturing and quality control standards. Ensuring first rate customer service has always been, and remains, a top priority.

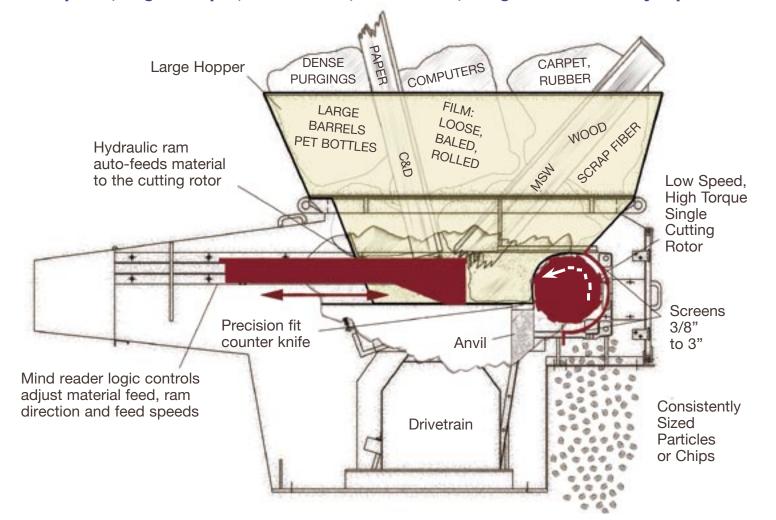
Today, Vecoplan has a substantial presence on virtually



every continent and has evolved into the undisputed leader in state-of-the-art size reduction and recycling systems. Currently Vecoplan has over 5,000 machines and systems operating around the world, including single-shaft, double-shaft and triple-shaft shredder models and various collection, separation and material handling systems.

## The Single-Shaft Rotary Grinder Concept

### Low Speed, High Torque, Low Noise, Ram Feed, Single-Shaft Rotary Operation



# Vecoplan - Your Total System Solution

#### Vecoplan is known for providing complete turn-key solutions.

Vecoplan provides complete material handling systems and design engineering including conveyors, pneumatics, metal detection and separation. American electrical control panels and components are available and may be fabricated to your specifications.

Vecoplan understands that installing new equipment can disrupt production operations and create new demands on your present electrical system. That's why we include a review and analysis of your present electrical components.





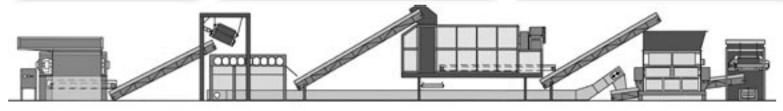


Vecoplan will help you plan for the additional equipment and prepare your present system to minimize any disruption to your operation.









# Our Complete Range of Products



- Single and Multiple Rotor Shredders
  - Conveying Technologies
  - Air Classification Systems
     Refiners
    - Rotary Trommels
    - Vibratory Feeders
- Oscillating, Roller and Star Screeners
- Ferrous and Non-Ferrous Detection and Separation
   Bulk Material Handling, Metering and Loading
- Turn-key Recycling and Waste Processing Systems







Document and **Product Destruction**  MSW - Single Stream RDF for WTE

Post Consumer **Plastics** 

C& D Composting E-Scrap

**Product Destruction** 

Document and

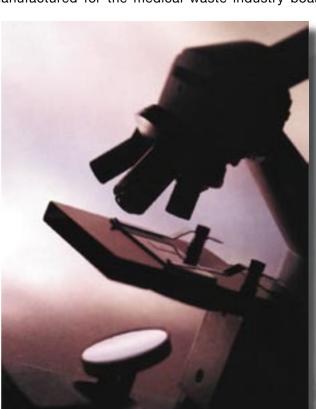
**Plastics** 

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#### Flexibility in Other Markets

Vecoplan specializes in manufacturing equipment catered to specific needs. For example, our line of shredders manufactured for the medical waste industry boasts features such as stainless steel screens, stainless steel



floor plates and specialized drip plates required for efficiency in the medical waste processing field. For materials that generate large amounts of heat, such as carpet, we offer features such as water cooled rotors and extensive temperature monitoring devices.

As the global leader in size reduction technology, Vecoplan's equipment is found in virtually every industry all around the world, and our flexibility and capabilities are simply unmatched.

#### Other Markets

- · Sterilized Medical Waste and Infectious Waste Processing for Unrecognizable Consistency
- Recycling and Fuel Prep
- Non-Ferrous Separation and Recovery
- Tire Shredding
- Many, Many More Fibrous, Organic and Solid Wastes

Vertical Model	Feed S	Single-SI Rotor Dia.		y Grinders Hopper Opening
RG24	20	15"	800 lbs/hr	24" x 32"
RG32	20	10" or 15"	2,200 lbs/hr	32" x 40"
RG42	25-50	10" or 15"	3,000 lbs/hr	42" x 48"
RG50	30-40	10"	3,500 lbs/hr	50" x 48"
RG52	40-125	15"	18,000 lbs/hr	52" x 58"
RG52 "Shorty	" 40-125	15"	18,000 lbs/hr	52" x 48"
RG62	75-125	15"	25,000 lbs/hr	63" x 80"
RG78	150-200	20"	30,000 lbs/hr	78" x 86"
RG98	225-250	25"	45,000 lbs/hr	98" x 120"

Horizoi Model	ntal Fee		Shaft Rot	ary Grinders Infeed Opening
VH14	40	12"	2,000 lbs/hr	14" x 3.5"
VH18	50-60	15"	3,000 lbs/hr	18" x 5"
VH25	60-75	15"	4,000 lbs/hr	25" x 5"
VH34	75	15"	6,000 lbs/hr	34" x 5"
VH50	125	15"	9,500 lbs/hr	50" x 6"



#### Municipal Solid Waste

Rising energy costs, the increasing expense of diminishing landfill space, progressive combustion technologies, emphasis on alternative energy sources, advances in preparation technologies for fuel conversion - all of these factors and developments are making the production of refuse derived fuel (RDF) a sensible option, both economically and environmentally. Vecoplan

is a pioneer and leader in advanced fuel preparation systems for the production of RDF. The shredding technology of the fuel prep system is the heart of any RDF refining process or waste-to-energy program. Shredder uptime and low maintenance costs are major factors in the profitability of all solid waste combustion operations.

In addition to its RDF prep systems, Vecoplan has the unique and fortunate advantage of extensive shredding experience in most applications found within our collected waste streams. Some of these applications include unsorted MSW processing, transfer stations, MRFs, multi-material and Single Stream Recycling, biomass, compost, wood waste from industry, C&D, plastics, paper, electronics and many specialized waste streams. From municipalities and cruise ships to Fortune 500 companies and entire industries - shredding is Vecoplan's specialty! From unique and proven shredding designs to award-winning developments in ferrous, non-ferrous, density and size separation and classification technologies, Vecoplan offers the most suitable systems available.

To compliment Vecoplan's shredding and separation equipment, innovative products for automated loading, material handling and integrated control systems are custom made for turnkey solutions.

Vecoplan is the expert in MSW shredding, separation and handling, but we are also partners with other innovative companies to provide

complete plants for production of RDF, MRF stations, refineries, and other waste processing facilities. Vecoplan has strategic alliances with other equipment manufacturers, engineering firms, municipalities and energy companies. With all of these resources, no other company can create a system or solution as effective as Vecoplan.

- Specialists in Shredder Design for Specific Waste Processing Applications
- Conveying Technologies
- Air Classification Systems
- Refiners
- Rotary Trommels
- Vibratory Feeders
- Oscillating, Roller and Star Screeners
- Ferrous and Non-Ferrous Detection and Separation
- Bulk Material Handling, Metering and Loading • Turn-key Recycling and Waste Processing Systems

• ReTech Single-Shaft Rotary Grinders





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Product Destruction

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## E-Scrap

The destruction of electronic waste has become an extremely important issue. Manufacturers of electronic components and products require a system capable of secure destruction of prototypes and out-dated material. Recycling companies are interested in the precious metals that reside in discarded electronics and end-of-life computer components.

Vecoplan offers the ideal solution in the form of unique technologies capable of the secure destruction of E-scrap without the need of manual de-manufacturing prior to processing. Ideal for the recycling industry, our grinders provide size reduction of e-scrap and durable goods.

In addition, Vecoplan offers separation technologies for automation in e-waste processing including ferrous, non-ferrous and density separation, as well as completely automated systems that shred and liberate dissimilar materials for separation.

- Audio / Video Cassettes
- CD's
- Floppy Disks

- Zip Disks
- Circuit Boards
- Telephones
- Clocks

- Small Kitchen Appliances
- Computer Hardware
- Televisions



#### C&D - Composting

Vecoplan offers a wide selection of equipment for the specific use in processing high volumes of construction and demolition debris - from large, centralized installations to mobile grinder models that can be moved on site and operated. These units are ideal for size reduction of construction and demolition waste and are especially useful in the preparation of wood waste for fuel and compost.

Vecoplan also offers a large selection of separation and screening equipment. Our separation systems are capable of separating ferrous and non-ferrous material, separating material by size or separation by density. We also offer a large selection of screening systems, including trommel screeners, disc screeners, star screeners, vibration and oscillating screening systems.

When it comes to construction and demolition debris, it's all about throughput and reliability, and our shredders are built for both. We grind and separate almost anything and have the least downtime and operating costs in the industry.

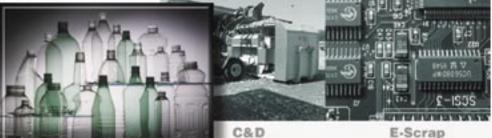
Treated and untreated wood, gypsum, paper, wiring, asphalt, ceramics, masonry, concrete, glass, and metal can all be sorted at the source or centrally at the MRF. Wood can be shredded for a wide array of uses; landfill cover, fuel, compost, etc.





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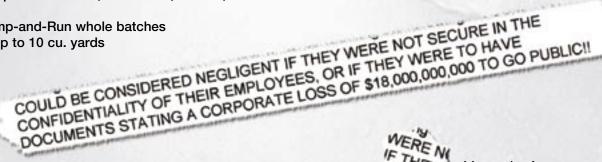
#### Document and **Product Destruction**



Processes binders with metal rings

# Product Destruction Versatility

- Obsolete, expired, or defective products
- Manufacturing rejects, out-of-date merchandise, returned items, experimental prototypes, contraband, etc.
- Destroy high volumes of products such as counterfeit products, audio/video cassettes, CDs, floppy disks and Zip disks, circuit boards, telephones, clocks, binoculars, cameras, toys, small kitchen appliances, computer hardware, televisions, textiles, etc.
- Dump-and-Run whole batches of up to 10 cu. yards



Sample from conventional strip shredder



in a single step process. Unlike strip shredders for paper which require a two-step process for cross-cut consistency, the ReTech cross-shreds in one pass offering variable and consistent shred size through interchangable screens. Large, bulky binders with metal rings, entire security and recycling containers, even full bales can simply be dumped into the ReTech Rotary Grinder with no need of material preparation - all either within a central, off-site installation, or with a mobile installation.



Controllable and consistent shred size

Vecoplan's

single-pass shred size

#### Post Consumer Plastics

As consumers and the industry become more resource-minded, the value of recycling post-consumer plastics increases. As collection programs and methods become more sensible and viable, the economics of recycling post consumer plastics begins to make more sense to industrial processors. Whether this easily segregated recyclable originates from curb side pick-up, single-stream separation at MRFs or deposit centers, this material has value and is increasing in volume. As technologies for reclaim and reprocessing become more refined and economical, it only makes sense to use it as inexpensive raw material and divert it from our landfills. Vecoplan offers its unique and highly acclaimed line of rotary grinders (with the features and benefits of both a shredder and a granulator in one), star and disc screens, conveyor lines, sorting systems, various separation technologies (ferrous, non-ferrous, density and size), including our unique air classification system, to both the recovery sources and the end users of this feedstock. Vecoplan offers systems to receive and shred bales of material in a dump-and-run fashion, sort, convey and separate, all in the most innovative, economical, safe and proven method possible. Our teams of engineers have the experience to consult and advise to ensure project integrity from start to finish.

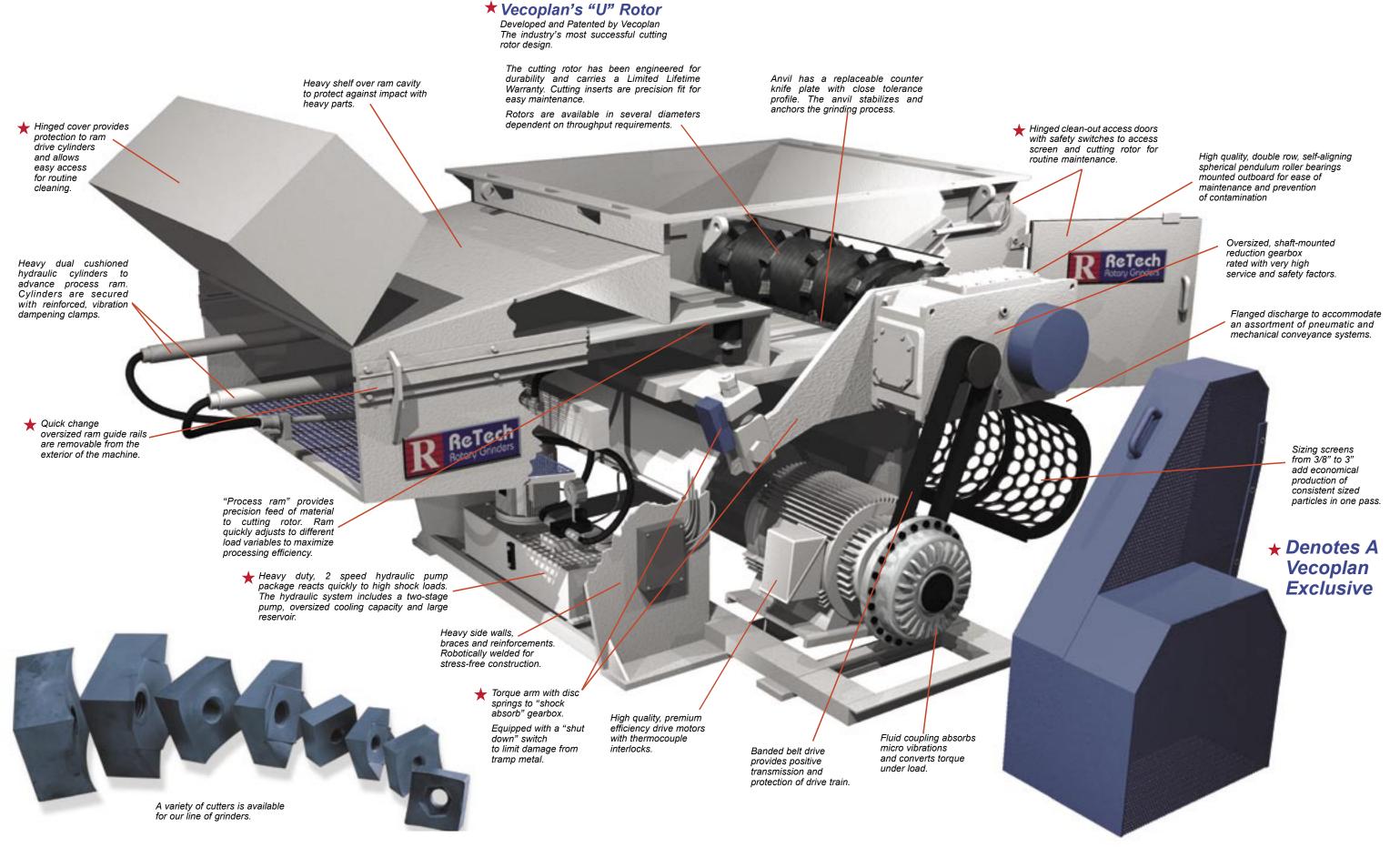
From MRFs to transfer stations, from municipalities to industrial reprocessors, from recycling to waste-to-energy systems, if it's plastic, post or pre-consumer, we've been there, done that and, most importantly, gained the experience to help you avoid those sneaky oversights and hidden downfalls.

You name it. We have systems processing bottles, films, strapping, and hard wastes from Resins #1 through #7.

### Multiple Applications

- Post Consumer PET/PP **Bottles and Containers**
- Municipal MRF Programs
- Front-End Synthetic Fiber **Production Preparation**
- Fuel Preparation Systems
- Full Bales of Plastic Waste
- Industrial Plastic Scrap





The ReTech Single-Shaft Rotary Waste Grinder