

TIRE RECYCLING

**PRE-INCINERATION
(MSW/OBW)**

PLASTICS RECYCLING

DRUM SHREDDING

C/D WASTE

OIL FILTER RECOVERY

ELECTRONIC SCRAP

WIRE/CABLE

**NON-FERROUS
PROCESSING**

...AND MORE.

SATURN **SHREDDERS**



***Where the world turns
for reduction answers.***

SATURN Solutions

Size reduction — it's a critical function of virtually every recycling operation. In fact, getting material down to size in the most efficient, safe, economical way possible, can often determine the degree of success an operation enjoys.

For nearly three decades, Saturn Shredders have provided answers to even the most challenging size and volume reduction problems. And with sizes from 50 hp to over 1000 hp, Saturn Shredders can provide solutions in the broadest range of applications worldwide.

Using a patented, anti-jam reversal system, every Saturn Shredder in operation is designed with performance and durability in mind. Saturn units are consistently cited by recycling professionals as among the lowest maintenance items of their type in use today. That performance is a direct result of a solid commitment to quality in design, engineering and manufacturing. It is also a reflection of the support offered by Granutech-Saturn Systems' service technicians long after the sale has been made.

Available in stationary, portable and mobile models, Saturn Shredders can be powered by either electric-hydraulic or diesel-hydraulic drives. Options are also available to meet specific process needs such as those found in processing of hazardous waste or other non-standard materials.

We've got your solutions and we welcome you to read on and learn more about them.

A Few Solutions— Just the tip of the iceberg.

SCRAP TIRE PROCESSING

Saturn Shredders have become the shredder of choice in scrap tire processing and recycling applications worldwide. Saturn's Model 62-40HT has established itself as the workhorse in tire processing applications and its newer, more powerful counterpart, the 60-44HT, has had equal success in operations processing large volumes of truck and OTR tires. Secondary processing equipment is also available.



THIN-FILM PLASTICS PROCESSING

Processing of thin film plastic in support of plastics recycling and remanufacturing operations is fast and efficient with any of several Saturn models. Because shredding increases bulk densities, process capabilities after thin-film shredding have shown dramatic upturns — some by as much as four times. In addition, shredding thin-film can often entirely eliminate the need for granulation prior to extrusion.



NON-FERROUS SHREDDING

The design of Saturn's High Torque (HT) Series shredders makes reduction of a broad range of non-ferrous scrap products, including cable and wire, aluminum sheet scrap, extrusions, castings, etc., simple and quick. In cable and wire operations, customers report increased processing throughputs through pre-shredding — almost double — as well as a significant reduction in wear on downstream processing equipment.



PRE-INCINERATION & RDF SHREDDING

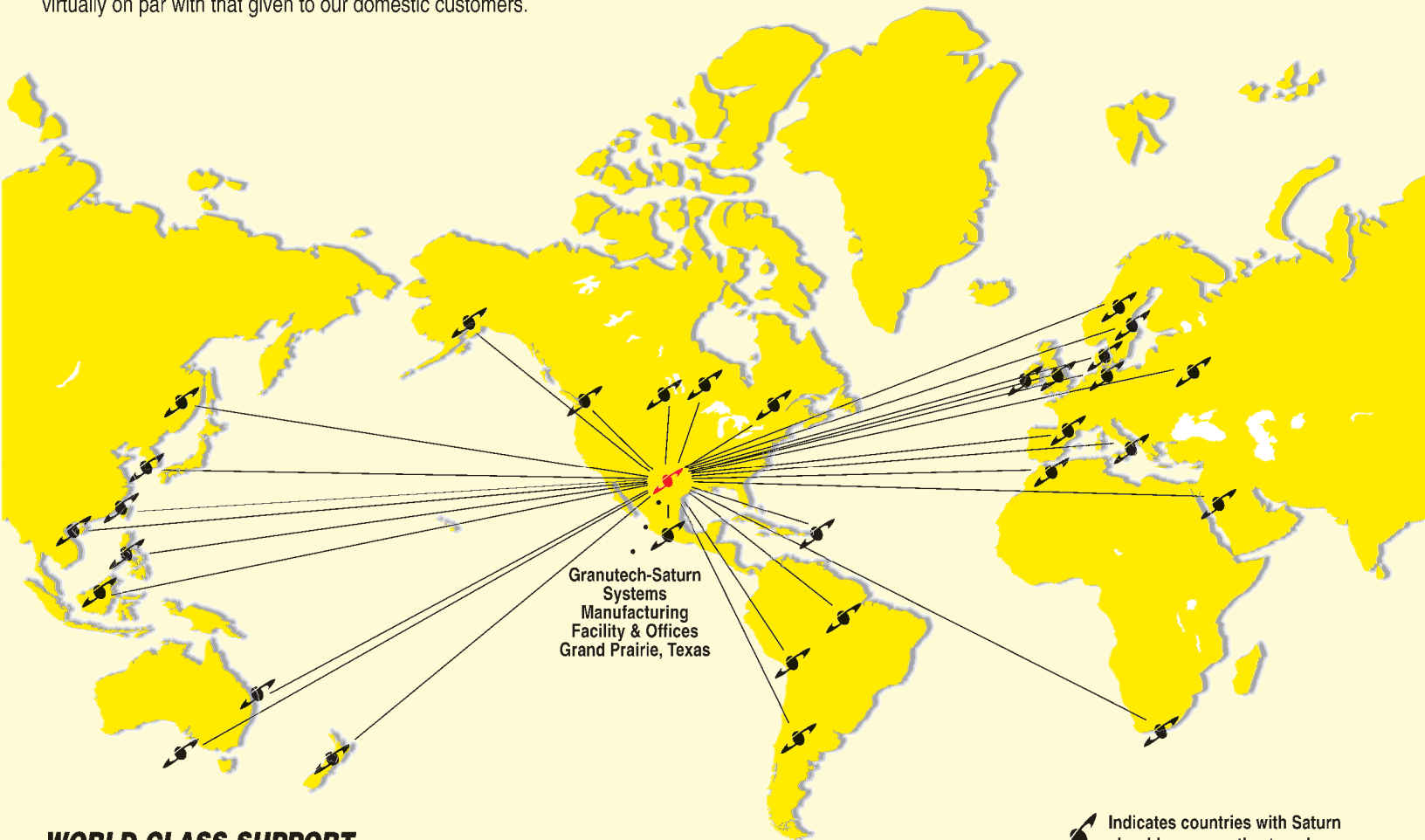
Shredding of oversized bulky waste prior to incineration has proven effective at providing optimum levels of size reduction.

In material recovery facilities geared toward preparation of material for refuse-derived fuel, pre-shredding has been shown to be effective at providing excellent size reduction — and doing so at a fraction of the maintenance needed for high-speed equipment. The benefit to you is a better product with lower operating costs.

GRANUTECH-SATURN SYSTEMS' INTERNATIONAL PRESENCE

Expert Answers... For Worldwide Problems.


The need for quality equipment knows no geographic boundaries. As a result, Saturn Shredders are now the shredder of choice for recycling operations — and others in need of efficient size reduction — the world over. Through this solid focus on an international presence, Saturn has established partnering relationships with representatives and distributors in all key areas of the globe. Doing so allows us to provide a level of service and support virtually on par with that given to our domestic customers.



WORLD CLASS SUPPORT

...At Your Service.

Support of all Saturn products — both domestic and international — is second to none. We recognize that the applications in which Saturn Shredders thrive are among the harshest imaginable and that these environments can make downtime occasionally unavoidable. When that occurs, we respond with a fully-trained staff of engineers and service technicians committed to getting you back in operation. In most cases service personnel will be at your site in a matter of hours, but we pride ourselves in a pledge to worldwide, world class responsiveness within 48 hours.

 Indicates countries with Saturn shredders currently at work.

Saturn Solutions We've got a

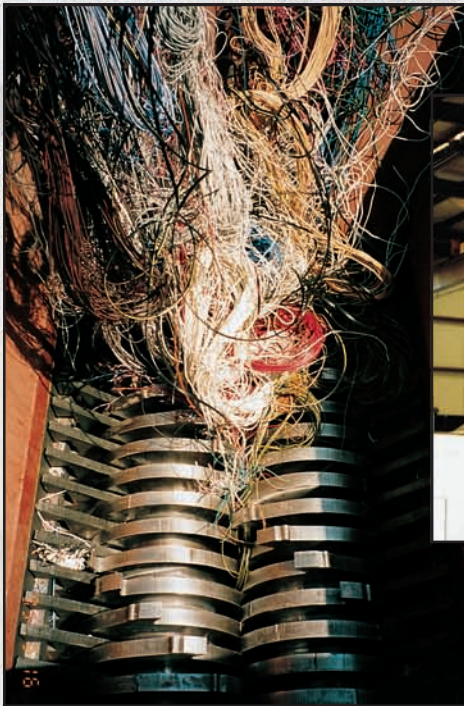
Someone else may have coined the phrase "nobody does it better," but since our introduction more than three decades ago, Saturn Shredders have been used in every application possible. Their durability and versatility, coupled with an ability to handle applications ranging from shredding of paper to processing nuclear waste, make our processing design and installation can also benefit from Granutech-Saturn's expertise from concept through installation and beyond.



MOBILE TIRE SHREDDING



DRUM SHREDDING



CABLE & WIRE PROCESSING



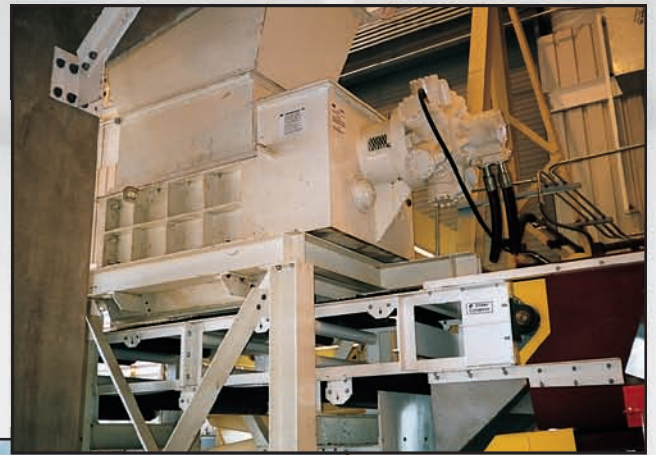
LOW RAD WASTE PROCESSING



PRE-

Solutions Available. One for you.

...ut we live it every day at processing sites throughout the world. Since their
...een providing the most cost-effective shredding solutions in virtually every
... unparalleled level of support, have made them the shredder of choice in
...aste and everything in between. Customers requiring assistance in overall
...aturn Systems' engineering expertise. Simply put: solutions are available



PLASTICS PROCESSING – HARD SCRAP



MSW SHREDDING (ONSITE)



NON FERROUS SHREDDING



WASTE TO ENERGY



INCINERATION OF MSW/OBW (MRF-BASED)

SOLUTIONS IN:

Ancillary Equipment

In our view, shredding your material is only part of the story.

Getting that material into and out of the shredder as efficiently as possible can also impact production.

Granutech-Saturn Systems' sales and



engineering staff offers a proven level of expertise in the evaluation, recommendation and installation of ancillary equipment. This can include infeed and discharge conveyors; disc, vibratory and trommel screen classifiers; separation equipment, including magnets, eddy-current separators and air evacuation systems; and more. Every Saturn Shredder is designed to efficiently integrate with all equipment supporting it. However, total turnkey system design and installation is a concept which Granutech-Saturn Systems has long embraced as the best course to ensure maximum efficiency and system performance.

DESIGN, TESTING & MANUFACTURING CAPABILITIES

The rest of the story...

TOP FLIGHT DESIGN

Equipment performance begins with, and is linked to, equipment design. Granutech-Saturn Systems' design engineers use the latest available technology and a thorough knowledge of materials used in manufacturing to ensure that each Saturn model is designed for maximum performance and durability.



Product modifications to suit individual conditions can be easily incorporated into existing designs, thereby making custom solutions available for your specific problem. Examples of such modifications include ejecting side walls for removal of unshreddable material and a side-entry push ram for processing of oversized bulky waste.

ONSITE TESTING

As part of the purchase process, customers are encouraged to test-shred their specific material at Granutech-Saturn Systems' expansive test facility.

Offering tests in both full-scale shredding and secondary processing in our Grizzly processor, we are able to offer an in-depth look at throughputs, power requirements, final product size and any challenges that have to be considered as part of the process.

A comprehensive report detailing the testing and its results is also available upon completion.



MANUFACTURING

At Granutech-Saturn Systems' Grand Prairie, Texas, manufacturing facility, the latest in manufacturing and assembly technologies are teamed up with an intangible: the commitment to excellence inherent in its manufacturing workforce. The result of this pairing is the industry's highest level of performance and reliability in a rotary shear shredder. Need proof of the benefits provided by Granutech's commitment to quality manufacturing? Every Saturn HT Series shredder sold since 1984 is still in operation today.

Granutech-Saturn Systems: The Whole Story

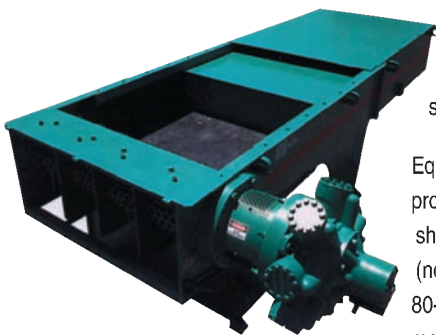
Granutech-Saturn Systems Corporation, offering equipment and peripherals under the Granutech, Saturn Shredders and MAC names, is one of the world's largest manufacturers of equipment and systems for size reduction and material recycling. Since 1965, the Grand Prairie, Texas-based company has demonstrated an unwavering commitment to quality equipment and world-class service for the various industries it serves, both in the U.S. and abroad. Shown here are Granutech-Saturn Systems' primary product lines.



Automobile recyclers and other ferrous/non-ferrous recycling operations have long relied upon MAC flatteners and balers for solid performance and minimal downtime. A full range of product offerings is available from the industry standard "Big MAC" flattener, to modified flattener designs for specialized processing demands.



As shown in the previous pages, Saturn Shredders have been providing quality solutions to shredding problems for more than two decades. Today shredders bearing the Saturn name offer the broadest range of choices possible for use in a wide range of applications and industries.



When size reduction needs call for secondary processing, one-step reduction and sizing or granulation and powderization, Granutech-Saturn Systems Corporation leads the way with solid, effective solutions.

Equipment offered by Granutech-Saturn Systems includes: the Grizzly processor (shown at right); Roto-Grind single rotor shred/sizing units (shown at left); and the Granutech G-3 granulator, (not shown) which, with available options, can produce material as fine as 80-mesh. All Granutech-Saturn Systems equipment is offered in a variety of models and sizes to suit your processing needs.



The bottom line? We do size reduction and we do it very, very well. If one-stop shopping is too trite a concept, then think of it as the most comprehensive source available for solutions to your recycling needs. No matter how you choose to look at it, we can provide the equipment — and the answers — you need.

EXPERT SOLUTIONS IN:

TIRE RECYCLING

**PRE-INCINERATION
MSW/OBW**

PLASTICS RECYCLING

**MSW
PROCESSING**

THIN FILM PROCESSING

DRUM SHREDDING

ELECTRONIC SCRAP

C/D WASTE

WIRE/CABLE

IN-PLANT WASTE

PRODUCT DESTRUCTION

HAZ-WASTE

**NON-FERROUS
PROCESSING**

TREE/YARD WASTE

NUCLEAR LOW-RAD

OIL FILTER RECOVERY

PALLET SHREDDING

and YOUR APPLICATION



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