
How to avoid the

**5 MOST
COMMON
MISTAKES**

in buying

**INFORMATION
DESTRUCTION
EQUIPMENT**



Allegheny Shredders
THE SHREDDING INDUSTRY ICON SINCE 1967

Over the past 40 years, we at Allegheny have assisted tens of thousands of companies throughout the world in selecting destruction equipment that will best meet their needs – and their budgets.

In this booklet, we want to share with you our knowledge and experience to save you time and money as you make this significant purchase. In particular, you’ll learn how to avoid the five most common mistakes people make when buying equipment for information destruction.

To begin this educational journey, we suggest you read the following introductory section and then “Methods of Destruction” to become familiar with the various types of destruction equipment available in the industry today. Information on the benefits and basics of shredding will follow, leading up to the five most common buying mistakes.

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In today's competitive business world, a company's most valuable asset is information — in the form of **documents** (financial records, personnel files, payroll data, customer lists, contracts, marketing plans, etc.); **multi-media** (CDs, DVDs, audio/videotapes, X-rays, etc.); and **e-scrap** (hard drives, cellular phones, electronic storage devices, etc.).

However, problems can arise when this information is no longer required, because it is often discarded carelessly. In fact, under various state and federal regulations, including the 1974 Federal Privacy Act, if your personnel files or other types of records are disclosed to outside parties — even by accident — it could be grounds for a lawsuit. In addition, recent laws — such as the Gramm-Leach-Bliley Act and HIPAA regulations — require organizations to completely destroy confidential information or face significant fines.

The only reliable way to ensure confidentiality and meet all federal and state requirements is to establish an information management system that includes *thorough destruction and disposal or recycling* of obsolete materials.

Methods of Destruction

To meet the wide range of information destruction needs — from documents to e-scrap (and everything in between!) — the industry offers a variety of equipment: **paper shredders** (strip-cut and cross-shred); **grinders** (screened output); **pierce & tear** (rough-cut); and **disintegrators** or **hammermills** (particle-cut). Obviously, it's important to choose the right type of equipment to securely destroy the specific form of information that you have. Keep in mind that each type of destruction equipment has its designated use, but can also usually destroy other types of information.

For example, paper shredders are designed mainly to shred paper documents, but can also shred multi-media. On the other hand, a grinder is ideal for multi-media, but can also process paper documents. But there's a trade-off. High volume shredders can process many tons of documents per hour — either “strip-cut” or “cross-shred”— while a grinder's output is much less. There is also specialized equipment designed specifically to handle the varying types of e-scrap.

Next, you must consider: What level of destruction is required (for example, shred width)? What level is acceptable for your paper documents? Multi-media? E-scrap? Typically, the higher level of destruction provides the greatest security, but again, there's another fact to consider: the smaller the shred pieces, the slower the shredding process and the more costly the equipment.

The following is a review of the major types of high capacity destruction equipment with each one's designated use. Equipment and basic shredding technology are the same for mobile (on-site) shredding units, with minor modifications. However, since most of our customers do plant-based (off-site) shredding, this booklet is geared toward that application.

Paper Shredders

Use sharp, rotating metal disks — called cutters — to shred paper documents and other non-paper materials such as multi-media (CDs, DVDs, X-rays, etc.) into strips (strip-cut) or small pieces (cross-shred). Ideal for processing high volumes of paper documents. Capacities range from 1,000 lbs. to over 12 tons per hour. (Note: To achieve higher capacities {3-4 tons per hour or more}, the use of a cart tipper or especially an automatic feeding system is required.)

Grinders

Utilize a single-shaft rotary design with cutting inserts coupled with screen sizes ranging from 3/8" to 4". Grinders shred multi-media and documents by grinding the material until it is small enough to pass through the screen (screened output).

Ideal for the destruction of multi-media or when a high level of security is required for paper documents. Capacities range from 1,000 lbs. to 8 tons of material per hour.

In spite of the grinder's advantages, it can be costly to maintain due to frequent rotation and replacement of the cutting inserts. And when processing paper documents, its capacity is much less than a high capacity shredder; it also generates a significant amount of dust requiring a dust collection system.

Pierce & Tear

Rotating blades pierce the paper and then tear it apart. Like a paper shredder, this technology uses cutters to shred material, but the cutters are made from low-quality steel and are not precision-ground.

Documents are 'torn' rather than cut (rough-cut). This results in large pieces of unshredded information that could compromise your company's security.

'Pierce & Tear' shredders are ideal for bulk reduction, but not the best choice for secure document destruction.

Disintegrators or Hammermills

Disintegrators randomly cut and recut the paper until a fine powder is produced. A retaining drum holds the particles until they are small enough to pass through a screen, and an industrial-grade vacuum helps pull the particles through.

Hammermills use rotating hammers to pulverize ("hammer") materials into tiny rice-size particles.

Both of these technologies are used when ultra-high security is a must – for example, to destroy classified documents according to Department of Defense (DOD) specifications.

Disadvantages of disintegrators and hammermills:

1. The equipment is expensive.
2. The destruction is slow, requiring processing in small batches.
3. The process is extremely noisy, with special sound insulation usually required.
4. Due to the high level of destruction, the paper fibers are too broken down to recycle.

Key Points in Selecting Equipment

Factors you need to consider are:

1. the type of information you need to destroy;
2. the level of destruction required;
3. the type of destruction equipment that will best meet your needs and your budget.

The Benefits of Shredding

When it comes to high volume destruction of documents, **shredding** technology is the most efficient and cost-effective method among those described above. For destruction of multi-media, e-scrap, and printer's waste, **grinder** technology is the best choice.

As you've learned, **Pierce & Tear** technology is not sufficiently secure, and while **Disintegrators** and **Hammermills** provide the highest level of



destruction, their cost, processing speed, and noise are disadvantages.

There are specialized shredders designed for specific types of information, such as products, hard drives, and e-scrap. Since the majority of our customers are looking primarily for document destruction, this booklet is geared toward industrial paper shredders.

Because shredding is an efficient, simple, and highly reliable process, it is the preferred method of document destruction in the vast majority of organizations today.

The Recycling Bonus

Shredding has an additional advantage, especially in high-volume applications: shredded paper can be compressed into bales and recycled. Today many organizations are discovering that recycling doesn't just protect the environment – it also can be a source of extra revenue.



A properly managed recycling program can more than pay for the cost of buying and operating a complete shredding system.

If you need a fast, cost-effective way to destroy confidential materials, with or without recycling, the rest of this booklet is for you.

Shredding Equipment Basics

Shredding equipment can be classified in two ways: by Size of Shredder, and by Types of Shreds Produced.

Size of Shredder

1. High capacity industrial shredders generally range in capacity from 1,000 lbs. to over 12 tons of paper per hour, depending on throughput capacity and horsepower. (Note: To achieve this high tonnage, an automatic feeding system is required.)

Designed for high volume destruction of paper documents, these shredders can also destroy virtually all types of confidential materials — from multi-media (CDs, DVDs, audio/video-tapes, X-rays, etc.) – to limited types of e-scrap (cellular phones, electronic storage devices, etc.).

Equipped with a crusher device, a high capacity shredder can also shred crumpled papers, cardboard boxes, beverage cans, and other wastebbin contents, with no need for the operator to sort or flatten these items in advance.

High capacity industrial shredders are generally used to meet the shredding needs of several floors or departments, or different buildings or locations.

2. Cross-Shredding systems offer the most advanced shredding capability in the industry for high volume applications. This technology utilizes an innovative two-stage



High capacity shredder with output conveyor and manual-tie baler

shredding process which results in a much smaller shred size than conventional strip-cut shredding.

Cross-Shredding technology involves positioning two strip-cut paper shredders at a 90° angle to one another. For example, a pre-shredder with a 75 Hp. motor and a 1-1/2" or 2" shred width discharges its output onto an input conveyor that feeds into a secondary shredder with a 100 Hp. motor and 1/2" or 5/8" shred width. This results in a highly secure output of cross-shredded pieces – comparable to grinder output, but far exceeding the grinder in capacity.

By adding a pre-shredder in front of an existing shredding system, you can more than double your capacity, while providing increased security due to the resulting shred size. Capacities

can be as high as 25 tons per hour, provided an automatic feeding system is utilized.

3. Complete shredding systems combine a high capacity shredder (or Cross-Shredding system) with an output conveyor and baler. A complete system can also include security carts for storing confidential materials, and additional conveyors for sorting, transferring and/or metering materials prior to shredding.

A complete shredding system is ideal for the destruction phase of a comprehensive records management system, because it can streamline the entire process of collecting confidential materials, shredding them, and recycling or disposing of the shredded output.



High volume cross-shredding system



A complete shredding system can include a tipper (or an automatic feeding system), paper shredder, output conveyor and baler

Types of Shreds Produced

1. High capacity strip-cut shredders cut materials into narrow strips, with shred widths ranging from 5/16" to 5/8"—the size chosen depends on the level of security



required and on the volume of material you have to destroy. Strip-cut shredders are the most popular type of shredder, for several reasons:

- a. **High throughput**
- b. **Relatively low initial cost**
- c. **Low operating and maintenance cost**
- d. **Versatility** – These shredders can shred many other types of confidential materials besides paper (CDs, DVDs, diskettes, audio/video cassettes, microfilm/microfiche, 3-ring binders, etc.), depending on the size and power of the machine.
- e. **Compactability** – Strip-cut shredded material is easier to compact into bales to further reduce its bulk. In high volume applications, baling allows more efficient recycling of shredded output.

2. Cross-Shredding systems cut materials into irregular short pieces, providing the highest level of security for high volume applications.



- a. **High capacity pre-shredder** with a 1-1/2" or 2" shred width does initial processing of materials.
- b. **Secondary shredder** with a narrower shred width (1/2" or 5/8") produces a highly secure output of cross-shredded pieces.
- c. **Versatility** – Cross-Shredding systems can destroy confidential materials other than paper, just like a strip-cut shredder can; however, the output is much more secure.
- d. **Baling** – Even though the shred size is smaller than strip-cut shredded material, cross-shredded materials easily compact into bales. Baling creates more efficient recycling when large volumes are involved.



Now that you know some basics about shredders, it's time we talked about...

THE 5 MOST COMMON MISTAKES in buying information destruction equipment – and how to avoid them...

MISTAKE #1

Buying the wrong type or size of shredder

Buying the right shredder for your organization isn't as simple as it sounds. There are dozens of factors to consider, including:

- Shredding capacity (amount of paper or other type of confidential material that a shredder will accept per feed or per hour)
- Type of feed opening (gravity-fed or conveyor-fed)
- Width of feed opening
- Shred type (strip-cut or cross-shred)
- Shred size (level of destruction required)
- Method of disposing and/or recycling of shredded output (for example, plastic bags or bales)
- Optional equipment such as tippers, conveyors, and balers (these can significantly save on labor costs in high volume applications)

To properly weigh these factors on your own may be difficult. How, then, can you avoid buying the wrong type or size of shredder?

The best solution is to find a vendor who has years of experience and is willing to listen to your needs and then make recommendations.

The vendor will want you to answer two major questions:



- 1. What type of materials will you need to shred?** Will you be shredding mostly **paper documents** (from boxes or bins, 3-ring binders, etc.); **multi-media** (CDs, DVDs, audio/videotapes, X-rays, etc.); or **e-scrap** (hard drives, cellular phones, electronic storage devices, etc.)?

This is an important consideration, because you want to be sure the shredder you buy has the right capabilities for the job. For example:

- If you need to shred tons of documents per hour, you'll want a high capacity paper shredder instead of a grinder.

- However, if you need to destroy a significant amount of multi-media, a grinder would be the best option.
- If you need to destroy e-scrap, such as hard drives, a more powerful shredder designed specifically for this type of destruction is ideal.

2. How much material will you be destroying per day or per week?

Most companies shred on a regular basis, especially if you're a contract shredding service. The frequency depends on the amount of material you need to destroy and the amount of labor you can allocate.

For high volume applications, consider how many pounds or tons of paper you'll need to destroy per hour or per day.

In making your estimates, think about whether the shredder will be serving several floors, departments, buildings or even companies.

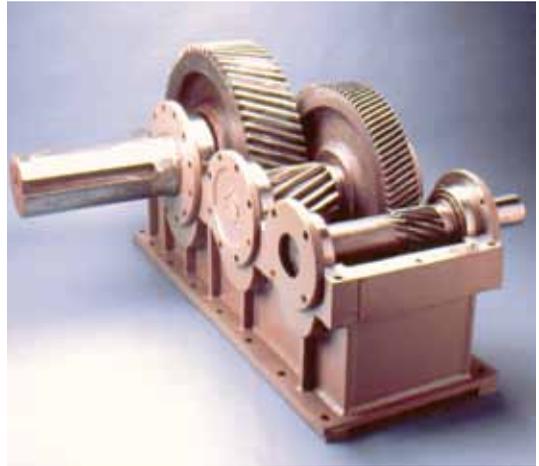
At the end of this booklet we've provided a Needs Assessment Form to assist you in evaluating your shredding needs. We suggest you finish reading the rest of the booklet, then fill out the form before you meet with a vendor.

MISTAKE #2

Not buying a quality shredder

Any shredder can shred paper when new. But shredding tons of paper and other materials day after day puts heavy loads on a shredder's components — especially the cutting assembly, drive train, and motor.

To handle this demanding routine, a shredder needs to be ruggedly built. If it isn't, breakdowns and costly repairs are inevitable. That's



why, out of all the things to look for in an industrial shredder, the most important is *reliability*.

Don't be misled by high-tech features or an attractive design. These may have their value, but it's far more important to look into the shredder's quality.

Here's how to go about it:

1. Question the vendor and review the product literature. This will introduce you to the electrical and mechanical components used inside the shredder. What types of bearings are used? What type of steel are the cutters machined from?

Don't expect to understand all the specifics. Just by asking questions you'll get a better idea about the quality of the machine and how well it is built, and you'll find out how well-versed the vendor is about his products. If he knows the details, he'll be able to explain the benefits of every aspect of his machines.

2. See a video demonstration of the shredder in action. Always look for evidence of quality in design and construction. For high volume applications, individual cutters and combers are preferred. Since

a high capacity shredder can be exposed to a greater amount of non-paper materials, if damage to a cutter occurs, it is much more economical to replace just a single cutter – rather than the entire cutting assembly.

3. When possible, take a firsthand look at the shredder you will be buying. Ask the vendor for a list of customers in your area so you can visit and see the equipment in operation.

When considering a high capacity shredder, see if you can visit the manufacturer's factory. Such a visit will truly educate you — not only about the equipment and the engineering technology used, but about the company itself.

The actual performance of a high capacity shredder is critical. Run the machine. Get a feel for the type and volume of material that it can shred. Confirm the vendor's claims about the machine's rated capacity in terms of pounds or tons per hour.

4. Call some of the vendor's customers and ask them about reliability. Does the shredder meet the vendor's claims about performance? How much downtime have they experienced, and what were the problems? How responsive was the vendor to solving these problems? Remember, the more reliable the shredder, the fewer repairs you will need and the lower your operating costs will be.

In conclusion, there are three main factors to consider when examining high volume shredders: **Quality, Performance, and Reliability.**

MISTAKE #3

Not streamlining your shredding operation for maximum output

In addition to purchasing quality shredding equipment, you'll need to consider where this equipment will be located within your facility, how materials will reach this location, how material will be fed into the shredder, and where the bales of shredded materials will be stored prior to shipping them to a paper mill.

Be sure to review the following considerations:

- When determining the location of your shredding room or area within your facility, be sure to take into account the size of this room or area.

First, you'll need adequate space for the shredding equipment as recommended by the manufacturer (the shredding area). You'll want enough room for the storage of materials in carts, bins or on pallets prior to shredding (the staging area). And if you'll be sorting the documents prior to shredding, a sorting area consisting of a cart tipper, sort conveyor and bins will be required. This will also require a storage area for the empty carts or bins. Finally, you'll need an area for the storage of bales prior to being shipped to the paper mill.

- Consider where the documents will enter the shredding area. If they will be arriving from different floors, how far are the elevators? What is the distance from the loading docks, if they will be coming from other facilities? Also, where will the tied bales be loaded onto trucks bound for the paper mill? You don't want your personnel moving the materials any further than necessary.



Cart tipper and sort conveyor

In addition, if you're providing a contract shredding service, where is your facility in relation to the center of your customer base? Is there easy access to the freeway for your trucks, as well as for trucks arriving from the paper mill?

- How will paper be fed into your shredding system – manually, with a cart tipper, or with an automatic feeding system? This one decision will greatly affect the overall performance and output of your shredding system. If you also utilize mobile shred trucks, you'll want to be able to discharge their shredded material onto a separate feed conveyor which feeds into your baler.

One or two operators can manually feed only so much material within an hour or a day. A cart tipper can increase the throughput of documents as well as minimize operator fatigue and strain. However, an automatic feeding system can greatly increase the amount of material to be shredded and

significantly reduce labor costs by allowing one operator to do the work of two or three.

You don't want to purchase a high capacity shredder and not be able to utilize its full capacity. For example, if your shredder has a capacity of 10 tons per hour, and you can only manually feed 2-3 tons per hour, then you're not using its full potential – unless your plans are to upgrade to an automatic feeding system when your business grows and your volumes increase.

- In addition, you'll need to consider using either a manual-tie or auto-tie horizontal baler for the compaction of the shredded materials. A manual-tie baler is less expensive, but the operator must stop the shredding operation periodically to manually tie off the bale or remove bales. However, with an auto-tie baler, the operator can just continue shredding while the baler automatically ties each bale and continues to push out the bales one after the other.

Depending on the size and projected growth of your shredding operation, a qualified vendor will be able to assist you in making the correct decision as to which type and size of baler will best meet your needs now, and in the future.

Overall, you don't want any aspect of your shredding operation to become a 'bottleneck' that either slows down your operation or limits the capacity of your shredding system.

- To ensure proper security, the room or area designated for the shredding operation, as well as the facility, should have limited access. If it is an open area within your facility, consider fencing or walling off this area to prevent any possibility of a security breach. In addition to security cameras monitoring the shredding operation, a quality security system should be installed.

You don't want to limit your shredding operation before you even begin. Allow yourself enough space to work, as well as to grow and

expand. A well-planned shredding operation will save you money by allowing your personnel to be more efficient and productive, instead of wasting time shuffling carts full of documents due to limited space.

When purchasing from a quality vendor, he should be able to assist you in the layout of your shredding equipment within your facility. Expert vendors, can advise you on the optimal way to streamline your shredding operation to make the best use of available space and personnel.

MISTAKE #4

Not planning for future growth

When considering how best to streamline your shredding operation, you want to be sure you are allowing for future growth. If possible, estimate your needs five years into the future. In the final analysis, it's less costly to buy



Complete shredding system with automatic feeding system

shredding equipment that's too large for your needs now than to have to replace it in a year or two when it proves to be too small.

Therefore, you'll want to consider:

- When choosing the area within your facility for the shredding operation, is there room to grow your operation to accommodate a higher volume of materials? Is there adequate space for more carts or bins? How about an automatic feeding system? An additional sorting line? Or even an auto-tie baler? Taking into account these options now will allow you to easily expand your shredding operations as you grow into the future.

Keep in mind that you may be able to delay the purchase of additional equipment if you just increase the number of hours of operation, such as having your employees work overtime, or even adding a second shift of workers. However, you'll need to determine which is best – increase your payroll or invest in automating your shredding operation.

- How large a shredding system can you afford at this time? Ideally, it's best to acquire the largest horsepower motor for the model of industrial shredder you're purchasing. You don't want the shredder to be the 'bottleneck' that limits the capacity of your overall shredding operation.

Another practical consideration relates to the electrical power supply to your facility. Is there adequate power available for your shredding equipment? How about future equipment that you may need to purchase?

- Since the value of recycled paper fluctuates, you may want to expand your storage of different grades of baled paper to either increase your return or to hold on to specific grades until the markets rebound.

Becoming knowledgeable and savvy in this field can definitely maximize your recycling bonus.

- If you're operating a contract shredding service, you may want to begin processing multi-media or even e-scrap, such as the destruction of hard drives. Also, when your business grows you may want to open an additional facility across town or in another city. Therefore, be sure to consider all your options as you develop your initial shredding operation.

So it's best to seriously consider your future growth now, while you're establishing your shredding operation. It not only makes good business sense, it can save you thousands of dollars and a lot of headaches.

MISTAKE #5

Not realizing the true cost: protecting your investment

It's a big mistake to think that the only cost of shredding equipment is the equipment itself. There's also the ongoing cost of operating and maintaining this investment that you've made. To avoid surprises, estimate both the initial and ongoing costs in advance.

- Factors affecting the initial cost of shredding equipment include whether the equipment is made in the United States or in another country, and whether a trade-in allowance is available for the equipment you may already have.

For example, some shredders are made overseas. This may save on labor costs during manufacturing, but the savings may be offset by import-export duties. If you already own a shredder, a trade-in allowance can reduce the initial cost of a new one. The vendor may



even guarantee a set trade-in amount on their own shredders when you buy a new model or larger shredder later on.

- Be careful of vendors who offer large discounts. You may not be getting the deal you think you are. In many cases, the vendor's prices may be marked up to give the illusion of great savings. For this reason, it's better to compare prices between vendors or deal directly with the manufacturer.
- When considering the ongoing costs of operating shredding equipment, labor is always the most significant. Don't make the mistake of buying a small shredding system to save money, only to find that your savings are wiped out by the cost of having personnel feeding paper for hours at a time. A larger machine can do the job quicker, leaving your staff free to do other tasks.
- There are many factors to consider in reference to ongoing costs. One of the most significant is the number of employees that will be needed to feed material into the shredder. If you need to shred tons of

confidential materials per hour, you may want to consider purchasing a cart tipper or even an automatic feeding system with your high capacity shredder.

A cart tipper offers an efficient way to load materials onto the shredder's input conveyor, thereby increasing throughput of material to be shredded and minimizing operator fatigue and strain. An automatic feeding system allows one operator to do the work of two or three, greatly increasing throughput and significantly reducing labor costs. An automatic feeding system can easily pay for itself during the first year of operation.

- The other, often neglected, factor is properly maintaining your shredding equipment. Preventive maintenance is imperative to the safe, trouble-free operation of your industrial shredding equipment. Considering your substantial investment in your shredding system, it makes good business sense to establish a systematic program of preventive maintenance. Remember that preventive maintenance can minimize the possibility of an unexpected failure.

For example, not properly lubricating a conveyor bearing or drive chain can bring your entire shredding system to a halt. Even though the cost to replace the bearing or drive chain may be relatively inexpensive, the loss in 'shred' time due to waiting for a replacement part or for a service technician may be extremely costly and could compromise your document security.

You may want to consider purchasing a 'replacement parts' package of the most likely components that wear or could be a problem when you buy your shredding equipment. Your vendor or the manufacturer will be able to assist you with this.

- Be sure your personnel are properly trained in the safe, efficient operation and proper maintenance of your equipment. This is not only important for the safety of your personnel but for the ongoing protection of your investment.
- Another potential expense is the cost of repair. You can minimize this by looking for quality equipment and buying a shredder that's backed by a strong warranty. The savings in total cost over the life of the machine can be significant.

In Summary:

- #1 Be sure you purchase the right type and size of destruction equipment to meet your needs and your budget.
- #2 Look into the quality of the shredder – including performance and reliability.
- #3 Streamline your shredding operation.
- #4 Assess your needs for now and for the future.
- #5 Estimate the true cost – both initial and ongoing.

By following these guidelines, you'll be able to make this important purchase with confidence, while also saving yourself perhaps thousands of dollars and headaches down the road. Quality shredding equipment will last for years. So take the extra time to evaluate your needs and discuss them with vendors. Becoming a knowledgeable buyer will provide you lasting peace of mind, ensuring that your long-term information destruction is efficient, thorough, and completely secure.

Glossary of Frequently Used Shredding Equipment Terms

Automatic feeding system Can greatly increase the amount of materials to be shredded and significantly reduce labor costs by allowing one operator to do the work of two or three.

Baler (horizontal) Used to compact shredded materials into dense bales for ease of storage, transportation, and sale to paper mills. These balers utilize a hydraulic ram to compress the material loaded. There are two types – ‘manual-tie’ and ‘auto-tie’.

Capacity The amount of material destruction equipment can process. Usually stated as number of pounds or tons of material that can be destroyed per hour.

Combers The metal spacers positioned between the rotating cutters in a shredder that guide shreds away from the cutter shafts, thus minimizing buildup of shredded materials.

Complete shredding system A system consisting of an industrial shredder, an output conveyor, and a baler – plus security carts, cart tipper, sorting conveyor, automatic feeding system, etc. as required.

Conveyor-fed A high volume shredder equipped with an input conveyor that transports materials into the cutting assembly. Most conveyor-fed shredders are equipped with a crusher device.

Cross-shred The name for the output of a cross-shredding system, ranging in size from about 1/2" x 2" to 5/8" x 3", depending on the shred width of the pre-shredder and secondary shredder.

Cross-Shredding system An innovative two-stage shredding process for very high volume applications, which results in a much smaller shred size than conventional strip-cut shredding.

Crusher device A mechanism used on a high volume conveyor-fed shredder to flatten crumpled documents, waste bin contents, cardboard boxes, beverage cans, and other bulky items so they will fit into the feed opening.

Cutters The sharp, rotating metal disks – usually sawtooth or hooked – that cut the paper into strips or small pieces.

Cutting assembly (also called cutting head) The entire assembly comprised of the cutters, combers, shafts, tie bars, bearings, end plates and spur/drive gears.

Feed opening (also called throat) The opening through which materials are fed into the shredder.

Gravity-fed (hopper-fed) A type of shredder in which materials move into the cutting assembly under the influence of gravity (see ‘conveyor-fed’).

Grinder Utilizes a single-shaft rotary design with cutting inserts coupled with screen sizes ranging from 3/8" to 4" (see ‘screened output’).

High capacity shredder Uses sharp, rotating metal disks – called cutters – to shred paper documents and other materials into strips (see ‘strip-cut’) or small pieces (see ‘cross-shred’).

Input conveyor A conveyor, usually used in conjunction with a crusher device, that moves materials into the cutting assembly prior to shredding.

Output conveyor A conveyor used to transport shredded materials away from the cutting assembly into a baler, compactor, dumpster, or other receptacle.

Particle-cut The name of the output from a disintegrator or hammermill. Usually, consists of fine rice-size particles.

Pre-shredder The first shredder in a two-stage cross-shredding system. This shredder is equipped with a wider than usual shred width (usually 1-1/2" or 2") to ‘pre-shred’ the paper prior to being shredded by the secondary shredder.

Reverse operation Briefly running a shredder in reverse to clear a jam.

Screened output The name for the output of a grinder. This output size is determined by the screen size ranging from 3/8" to 4".

Security cart A cart, usually on casters, used to store confidential materials under lock and key prior to shredding. These are often available from vendors.

Shred type References the type of output produced by a specific kind of destruction equipment, such as strip-cut; cross-shred; screened output; particle-cut; etc.

Shred width The width of the strips produced by strip-cut shredding. Usually ranges from 5/16" to 5/8".

Sort conveyor A large, variable-speed conveyor that allows operators to sort material by type and grade before it is placed on the input conveyor and shredded.

Strip-cut The output of a type of shredder that can cut a wide range of materials into strips of shredded output. Strips range in width from 5/16" to 5/8" depending on the shredder, and up to 2" on a pre-shredder used in a cross-shredding system.

Tipper A lifting device used in conjunction with security carts that offers an efficient way to load materials onto the shredder’s input conveyor. A tipper increases throughput of material to be shredded and minimizes operator fatigue and strain.

Shredding Equipment Needs Assessment Form

Please use this form to evaluate your shredding needs.

1. Is your goal to meet the shredding needs of your:

- building
- multiple buildings or sites
- contract shredding service
 - on-site (mobile)
 - off-site (plant-based)

2. Does your organization require:

- a high capacity shredder for each building
- a complete shredding system for each building or site, including conveyors and baler
- a mobile shredding system

3. How frequently will you be shredding?

- daily: one 8-hour shift two 8-hour shifts three 8-hour shifts
- weekly _____
- other
- not sure

4. The quantity of material to be destroyed is commonly estimated both in terms of:

- a) the number of security carts within a department or building
- b) the total pounds or tons of stored records

To quickly estimate your needs, determine the number of security carts (and the size of carts) and the total pounds or tons of material to be shredded. (If possible, project your estimates for five years into the future.)

Total number of security carts:

- _____ x 64 gal. (Full capacity of 200-250 lbs.) = _____ Total lbs.
- _____ x 96 gal. (Full capacity of 300-350 lbs.) = _____ Total lbs.
- _____ x ____ gal. (Full capacity of ____ - ____ lbs.) = _____ Total lbs.
- _____ x ____ gal. (Full capacity of ____ - ____ lbs.) = _____ Total lbs.

Total number of Banker's boxes:

- Number of one-foot Banker's boxes: _____ x 35 lbs. = _____ Total lbs.
- Number of ____" x ____" x ____" boxes: _____ x ____ lbs. = _____ Total lbs.
- Number of ____" x ____" x ____" boxes: _____ x ____ lbs. = _____ Total lbs.



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