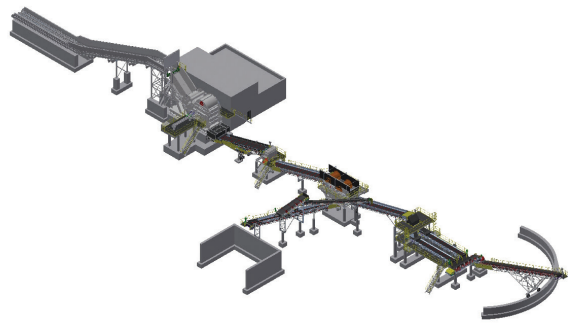




INTEGRATED RECYCLING SYSTEMS

Harris Complete Package

Let the Harris Integrated Recycling Systems group provide you with a complete system to compliment the Harris family of recycling equipment or future material handling and processing additions. We have a staff of structural, mechanical, and electrical engineers to design and supply small to large projects. Our hands on experience in providing and managing projects for shredder facilities and years of working closely with other top brand name equipment providers has given us a reputation of supplying quality systems on time that perform second to none. We design all of our systems with state of the art modeling software and adhere to industrial mechanical, structural, electrical, and safety standards.



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Harris

SHREDDERS





HS 6090



HS 80115



HS 98115



HS 125125

HARRIS SHREDDER SPECIFICATIONS

Shredder Model		HS6060	HS6090	HS80115	HS98115	HS125125
RPM		600	600	600/514	514	450
Ferrous Shred Output (TPH) at HP rating*	1000	10-14				
	1500	14-20	25-35			
	2000	20-35	30-45			
	2500		40-50	50-60		
	3000			75-105		
	4000			90-120	90-150	
	5000				140-180	
	6000				160-220	
7000					180-300	
8000					200-350	

*Performance rates are Subject to Material Content, Material Pre-shred Densities, Feed Rates, and Other Variables in Shredding. Specifications are subject to change without notice. All information is correct at time of printing.

Our Promise

At Harris we believe in the on-going support of our machines. Our domestic and international partners are there to make sure that your experience with a Harris product is superb.

Harris shredders are fully engineered, manufactured and assembled at our plant in Cordele, Georgia (without castings) to eliminate any "first-time fit" problems during installation in the field.

ISO 9001: 2008 Certification:

The management system governing the manufacture of Harris Shredders is ISO 9001: 2008 certified.

Shredder System Upgrades

Harris offers:

Replacement Rotors:

Harris can replace most systems with our high-quality rotors. Upgrade your disc rotors to a 12-pin design to increase overall wear life.

Base & Midsection Replacement:

Harris can build or replace the base and midsections of your previous generation or older shredder enhancing the older technology with current Harris design quality standards with out replacing the entire shredding plant.

Double Feed Roller (DFR):

Harris can upgrade your current DFR for most shredder makes and models with our premium DFR. Harris Heavy-duty DFR is designed to handle the toughest jobs, manufactured for durability and may increase your current production rates.

Downstream System Upgrade:

Harris engineers can develop superior engineered downstream systems for both ferrous and nonferrous downstream systems designed to fit your specific needs and requirements.

Harris Automation Upgrades:

Geared for older manual systems, Harris Automation can install and retrofit modern Harris control and automation systems for equipment that is still productive but outdated. All Harris Automation systems are custom system upgrade designed for your specific needs.

Other Upgrades:

Harris supports upgrades and replacements to other areas of your shredding system including motor packages, infeed conveyors and other components for most shredder brands.



Harrisequip.com

Our web site contains detailed information about all Harris products. You can skim through products, download product brochures, read news on everything Harris and find your local sales associate.

SHREDDERS

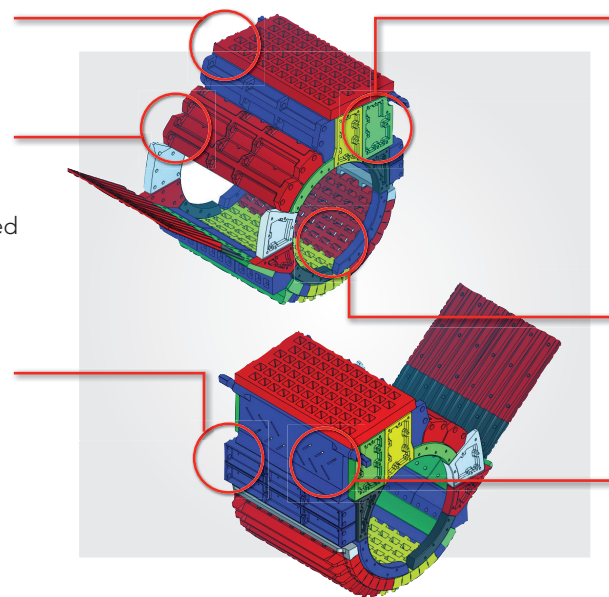
Internal Castings

Harris exclusive keyed round head bolts provide larger contact area with the castings for a better load distribution

An enlarged top grate increases the material throughput.

Large front wall castings have longer life than traditional fabrications with bolted liners, without requiring continuous maintenance. Easy top feed installation. Secured by tie rods that strengthen the midsection rigidity.

Rear wall castings are slightly offset from the path of the material. These replaceable back walls are tie-rod held for additional strength to the midsection and create a much longer work life than fabricated back walls, without the maintenance associated with them.



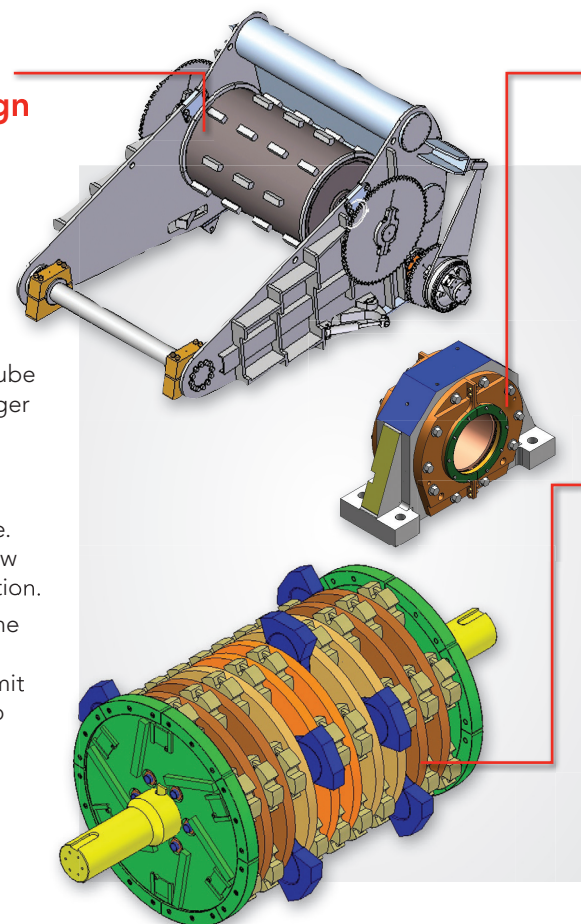
The Harris Shredder's unique sideline design reduces throwaway weights with its weight reducing pockets that provide extra support around the liner bolts. Harris' exclusive keyed round head bolts efficiently distribute the load around the circumference of the bolt head.

Self-supporting bottom grates eliminate the center support maintenance and have longer wear lives.

Oversized Reject Door allows a faster removal of unshreddables, with Harris' exclusive outward movement. This eliminates continuous impact of the material while in operation.

Exclusive, Heavy-Duty Double Feed Roller Design

- Sturdy reinforced steel plate yoke.
- Exclusive 3-tube design for enhanced rigidity to torsion.
- "Quick Release" design allows the removal of the complete roller without components disassembly.
- Continuous large diameter torque tube pivot distributes loading along a larger area. Tube sits on large steel split pillow blocks with bronze bushings.
- Large mechanical locks allow safe work conditions during maintenance. The hydraulically actuated locks allow positioning from a remote safe location.
- Harris' patented Teflon seals allow the best sealing capability in this heavy duty environment. Teflon seals permit the re-honing of the cylinder tube to non commercial sizes for extended service life.



Rotor Bearing Housing

Rotor bearing housings are machined from high strength forged alloy steel. Internal lubrication connections allow placing fittings only on the outboard side for easy maintenance. Closed Loop Oil Recirculating Unit provides filtered and cooled oil to the bearings.

Rotor Options

Harris offers OEM and replacement rotors for existing shredders, welded and non welded disc and 4-arm spider designs. Each disc, spider arm and spacer is shrink fitted and keyed to the shaft while the complete assembly is secured by tie-rods. Harris uses high strength steel alloy plate on all rotors. The end discs have replaceable caps for better wear resistance. Replaceable heavy-duty helmet cast steel caps protect the spider arms

Harris MS 6060/ MS6090 Modular Shredder Plants

The Harris Modular Concept allows for fast installation with minimum investment in foundations to get a system operational and producing clean finished scrap in the least amount of time. Each unit of the modular shredder system is designed with the same robust heavy duty construction that Harris is known for. The Modular MS 6060 and MS 6090 are now available with infeed conveyors, support structures, self contained hydraulic and electrical buildings, and complete modular downstream systems.

Heavy Duty Infeed Conveyor and Shredder Steel Support Structures

Infeed conveyor head support tower with service platforms and dirt chutes are supplied the same as our standard systems with beam and cross braced configuration for a rigid mount. The infeed conveyor load section is supported by heavy duty structural steel beam and plate piers designed to withstand the most abusive loading conditions. The shredder spring base is also supplied with the same beam and plate piers. This pier design distributes the load over a larger area reducing the stress on the concrete foundations.

Control Tower

The modular control tower with stairway is located near to the infeed conveyor tower and allows access to the infeed conveyor motor service platform. The tower is designed with same heavy duty beam and cross brace construction as the infeed tower. At the top of the control tower a control cabin with the same construction used in our full size plants sits above the infeed chute, which allows the optimum field of view for the operator. The ergonomic control chair with a new 22" HMI touch screen operating and reporting system is included inside the control cabin.

Main Motor

The modular drive package is comprised of several options, and is sized relative to each application. The drive package comes with a heavy duty motor base with access to service platforms on the shredder drive side, and to the electrical room service platform. Each unit includes the standard shaft guard and modular building with ventilation, lighting, and prefabricated cable trays for motor cables.

Hydraulic and Electrical Buildings

All hydraulic power units, water injection system, motor switchgear, and control panels are all contained inside our new modular buildings. Harris designed and constructed the transportable buildings specifically for this application. The buildings are unique in that they can be installed near the shredder so that the roofs can be used as service platforms. The roof platforms are pre-assembled with auxiliary equipment ready for quick installation. All piping and conduit are ceiling mounted which allows for clear service access around all electrical and hydraulic units. Buildings are insulated with HVAC units installed providing clean controlled environments for internal equipment. An air purge system along with manual valves are included with each water injection system to ensure that all water is evacuated from all pipes in each circuit after shutdown in cold climates.

Downstream

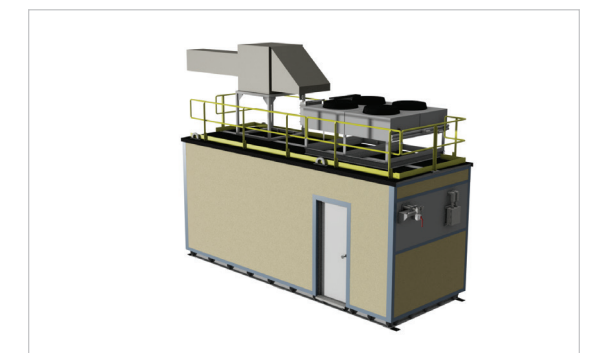
Modular ferrous and non-ferrous downstream systems are configured and provided to meet requirements of each application. All conveyors are sized and designed to minimize support structures and provide clean operation. Each structure and material transition is designed to minimize installation time and cost while maintaining the same engineering, performance, and quality expected from Harris equipment.



MS 6090 Modular Shredder System



Modular Hydraulics Building with Pin Puller Platform



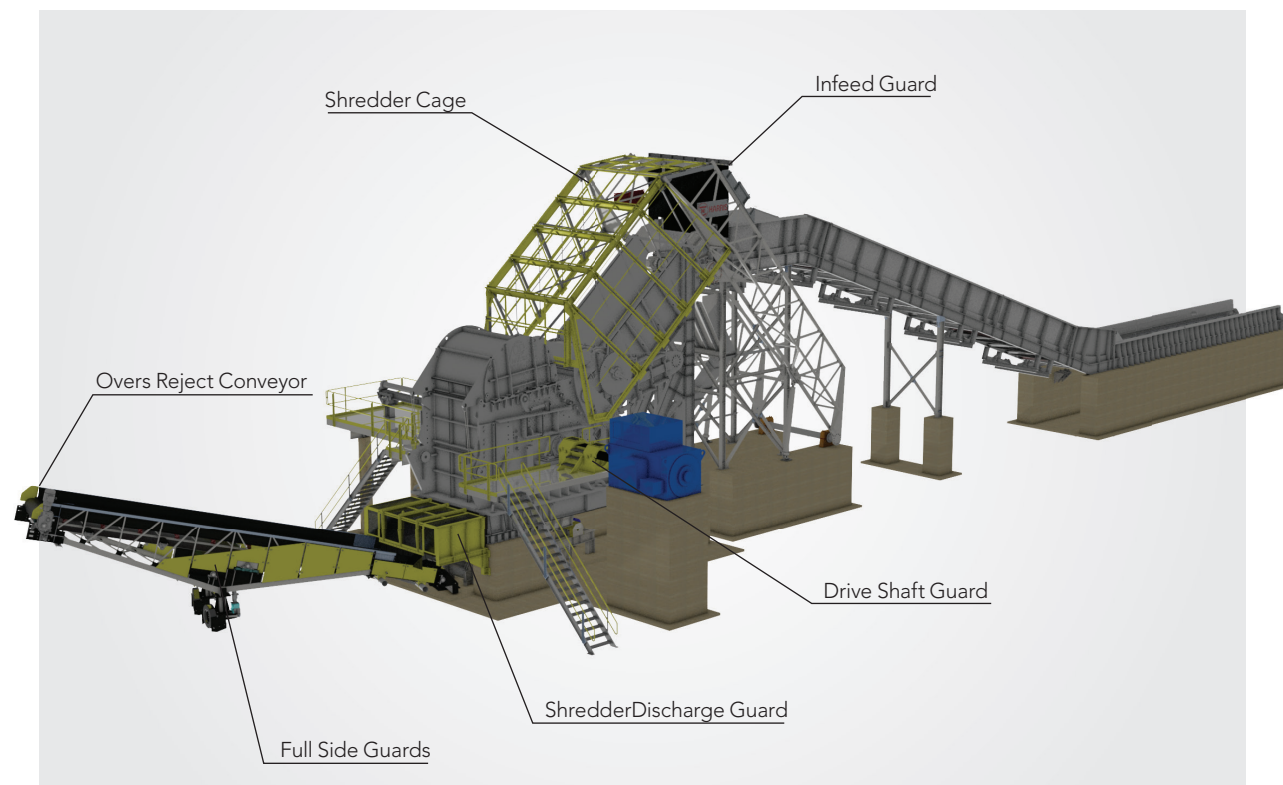
Modular Medium and Low Voltage Electrical Building



Modular Shredder Motor Building & Support Structure

Harris Safety Standards

Harris is committed to providing the safest and cleanest operating shredding systems in the industry by supplying our patented shredder cage, infeed guard, drive shaft guard, and shredder discharge guard as standard equipment on all new shredder systems. All downstream components are also designed with guarding, interlocked safety e-stops, pull cord e-stops, and service disconnects to meet or exceed the latest ANSI and OSHA safety standards. Also, as an option we have a new overs reject conveyor which can be added to increase productivity and add even more safety for personnel. This addition allows over sized rejects to be feed on to the discharge conveyor and then the conveyor will pivot away from the downstream system allowing the operator to drop the oversize reject onto the ground and then pivot back to continue processing without using cranes or personnel to clear the reject.



Existing System Safety Upgrades

Please ask a Harris sales associate about our safety equipment for upgrades to existing shredder plants. Our guarding can usually be retrofitted to most systems and provide extra protection for personnel and equipment.

Harris Shredder Control System

Harris Production Management system (HPMv.2) provides real time access to production rates, energy usage, and critical operational feedback from the comfort of the ergonomic operators chair fit with joysticks and an intuitive 22" HMI solid state touch screen. Daily production reports, long duration downtime alarms, and routine service reminders can be emailed to keep management current with plant operations. The Harris HPMv.2 management system can be retrofitted to existing systems to provide your plant with vital operations data.



SHREDDERS