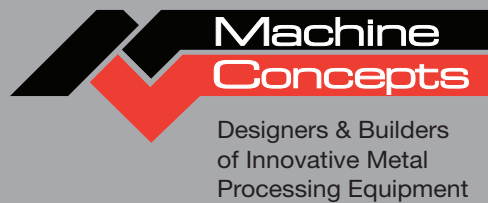


# Scrap Chopper Equipment



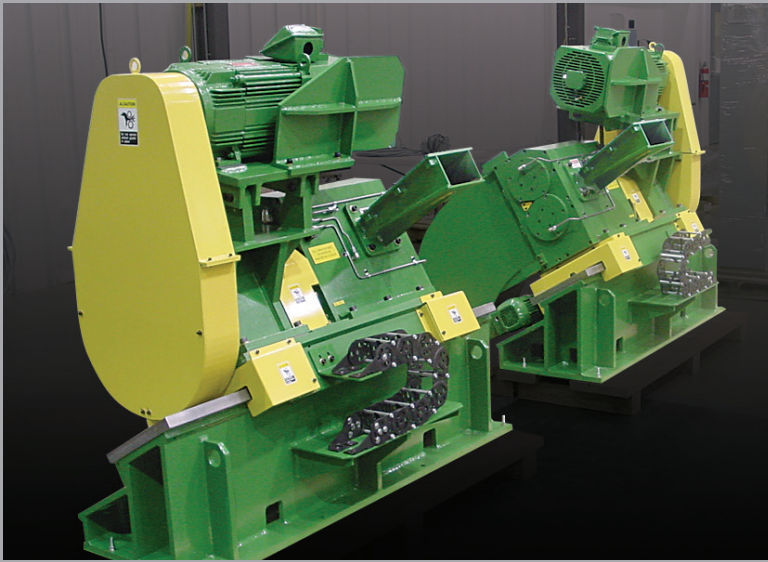
Scrap Choppers  
Custom Designed and  
Built for Your Application



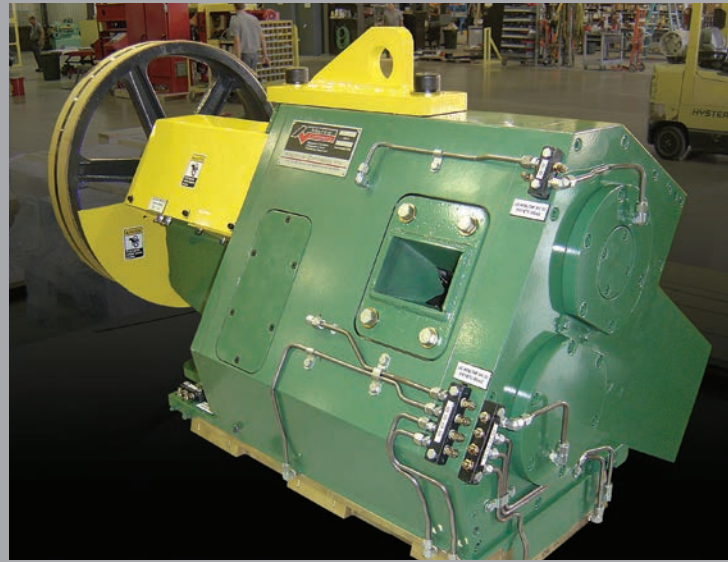
## Performance Advantage

Machine Concepts specializes in slitting  
and side trimming scrap-handling needs.

# Scrap Chopper Equipment

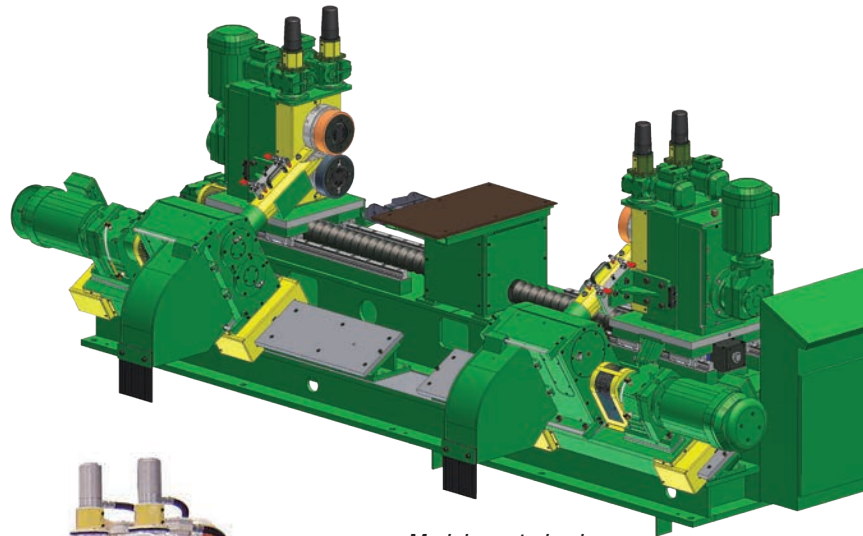


Customized Choppers for Slitting Line Application

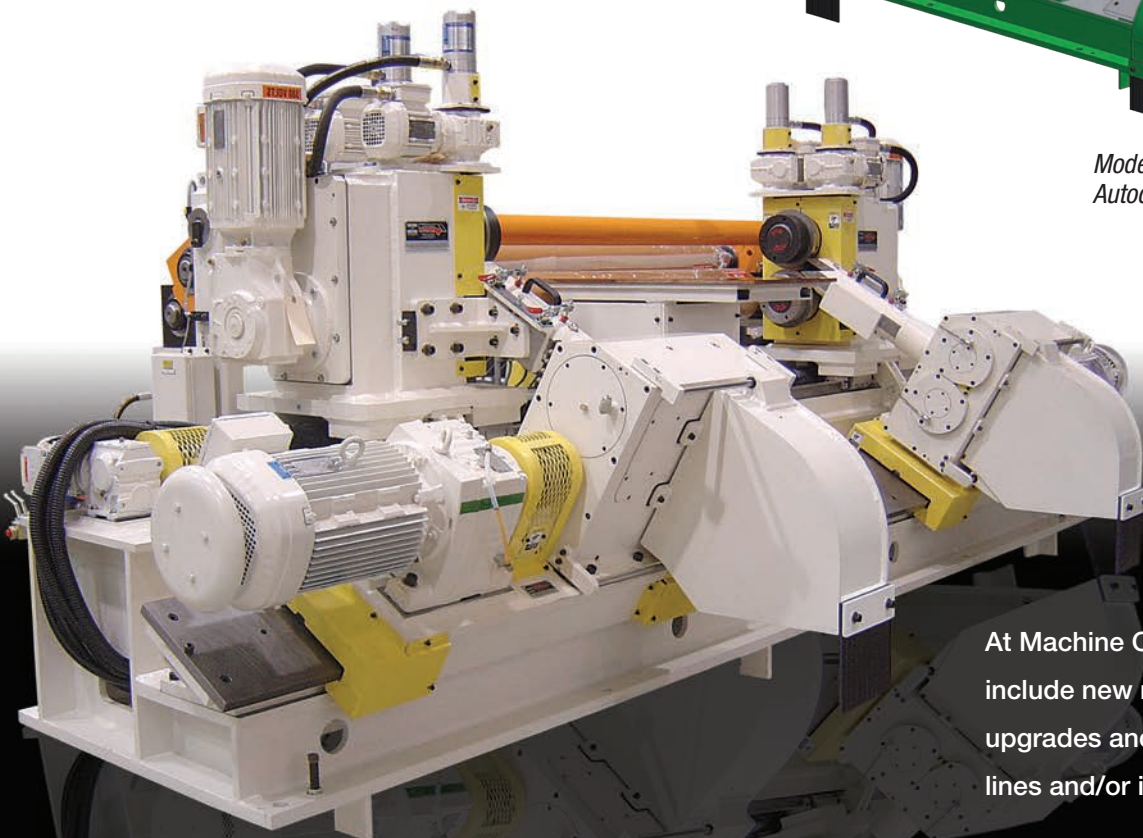


Customized Replacement Chopper Heads

Machine Concepts specializes in custom designed and built scrap choppers to accommodate all your slitting and side trimming scrap handling needs.



*Model created using Autodesk Inventor software.*



At Machine Concepts our capabilities include new machine development, upgrades and retrofits into existing lines and/or installations.





Retractable Chopper for Existing Heavy Gage Slitting Line



Chopper for Existing Heavy Gage Narrow Width Slitting Line

## Scrap Chopper Standard Features

- ▶ Dual drum with raked blade cutting action – Optional straight blade available
- ▶ True elliptical knife profile to maintain constant knife clearance throughout the cut
- ▶ Each knife has four cutting edges
- ▶ Quiet operation and reduced peak drive torque
- ▶ Arbors supported on both sides of cut via precision tapered roller bearings
- ▶ Easy access, setup and maintenance of knives
- ▶ Customized self threading scrap chutes
- ▶ Broad gage range with no setup change
- ▶ Shorter scrap lengths
- ▶ Anti-backlash helical gearing
- ▶ Heavy-duty welded steel housings
- ▶ New machine development, upgrades and retrofits into existing lines and/or installations

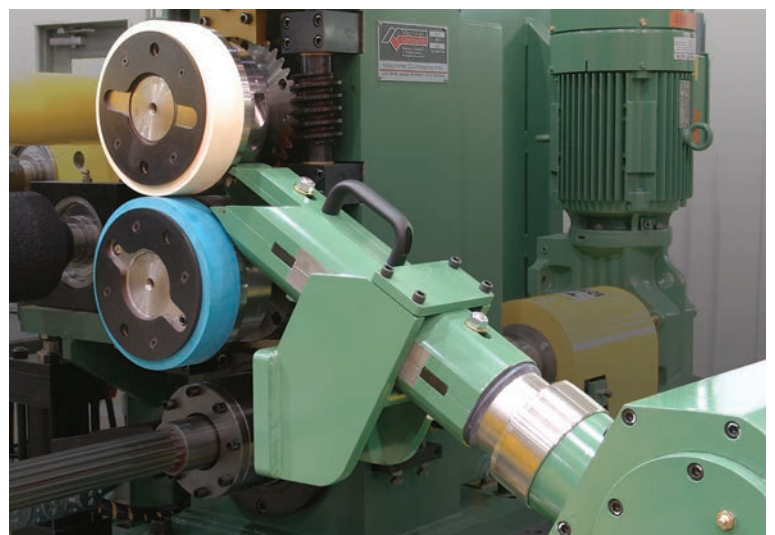
## Broad Capabilities

Machine Concepts is an engineering based company with many experienced mechanical and electrical engineers on staff. We have access to the latest technology available in our fields and have successfully applied it to help solve customer's problems. Some of our capabilities include:

- ▶ Custom machine development based on customer's needs
- ▶ Project integration and management, mechanical and electrical
- ▶ Latest 2D and 3D CAD systems
- ▶ Detailed machine testing and data collection
- ▶ CNC machining in house
- ▶ Complete machine assembly and wiring done in house



Raked Blade Setup



Customized Self-Threading Scrap Chutes

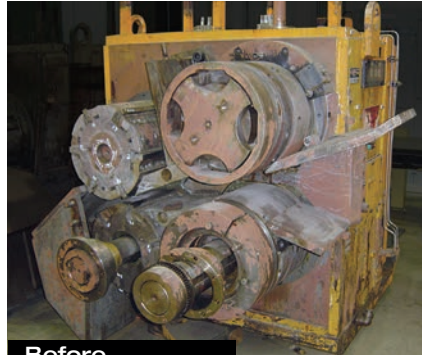


# Scrap Choppers and Hot Mill Trimmer/Chopper Rebuilds

## Rebuilds and Upgrades

Machine Concepts has extensive experience rebuilding all types of scrap choppers. When required, we can offer engineered solutions to upgrade or retrofit existing machines. Our basic rebuild scope of work includes the following:

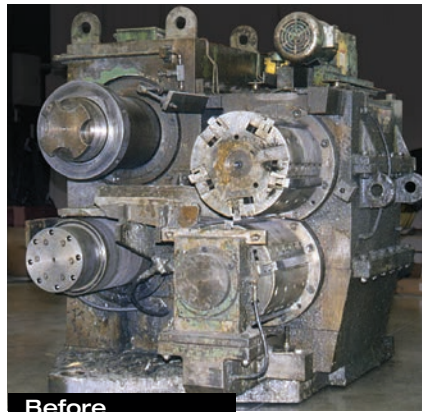
- ▶ On-site baseline inspection
- ▶ Complete equipment inspection and reports before teardown, including endplay checks, breakaway torques, knife heights and gaps and arbor lift – All reports are provided to customer for their records
- ▶ “Pre-Rebuild” inspection reports according to print specifications, including arbor measurements and run-outs, housing bore measurements, and bore alignments
- ▶ Refurbish and repair work per customer's instructions
- ▶ In house inspection of precision bearings and grinding of bearing spacers for proper preload or endplay to obtain knife gaps required for high quality trimming and chopping – Machine Concepts has experience setting up bearings up to 40" in diameter
- ▶ Reassembly with new bearings and seals
- ▶ Chopper set-up with proper knife height and gap – Anti-backlash gearing spacers are measured and ground to control chopper knife gap during operation
- ▶ Lengthy test runs on chopper heads before shipment
- ▶ Final inspection reports and run-in data provided to customer



Before



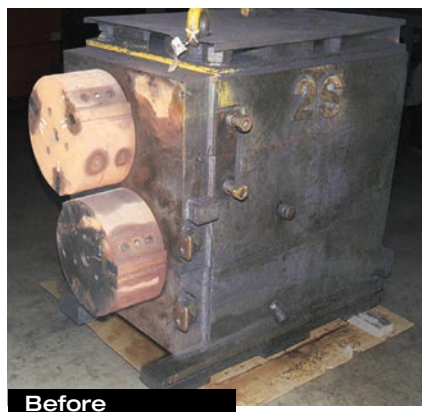
After



Before



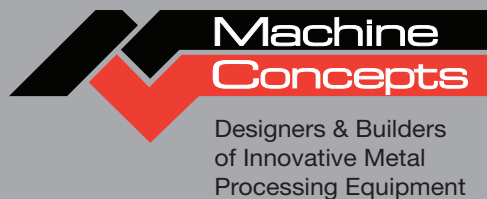
After



Before



After



Machine Concepts Inc. modern engineering and manufacturing facility