

Metso Scrap Shears
We understand
your business





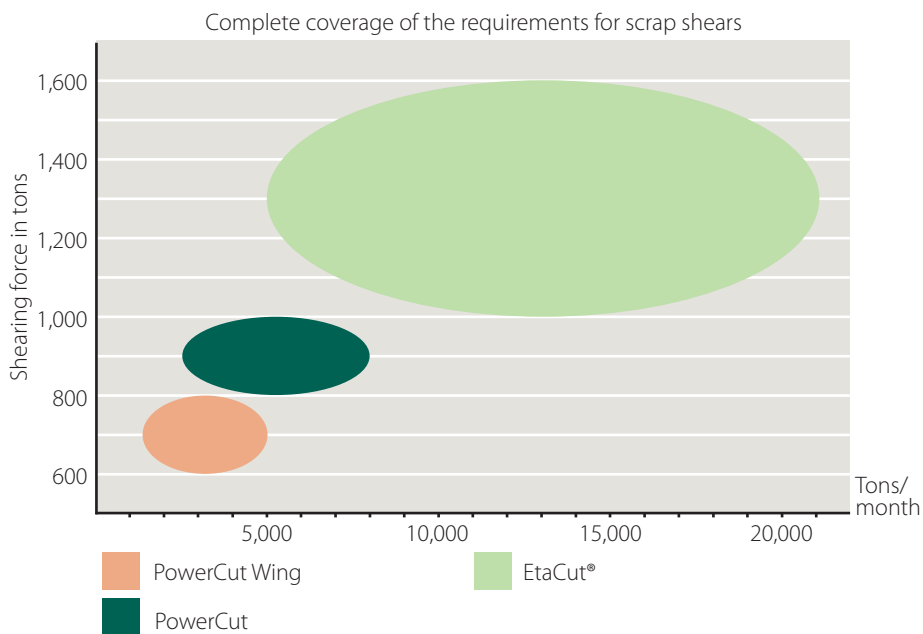
The right scrap shear for your company

There are no small, medium or large businesses just different requirements

More than 90 years' experience in the recycling field and commitment to meet the needs of our customers has paid off. The technology, which is regarded as the best worldwide, is documented by superior productivity together with extremely low downtime. Ever since we introduced, the top model Metso EtaCut® series this high-performance shear has set the benchmark. When Metso Recycling introduced the smallest Metso PowerCut Wing as semi-mobile shear it successfully established itself in smaller and medium volume scrap yards. To complete our program, we have incorporated our capabilities and the feedback from our customers into a new class of shear which has been specifically designed for medium volumes. The result is the Lindemann PowerCut model, which sets new standards in efficiency. With our complete and specialized range of solutions, we are confident that we can meet all our customers' requirements.

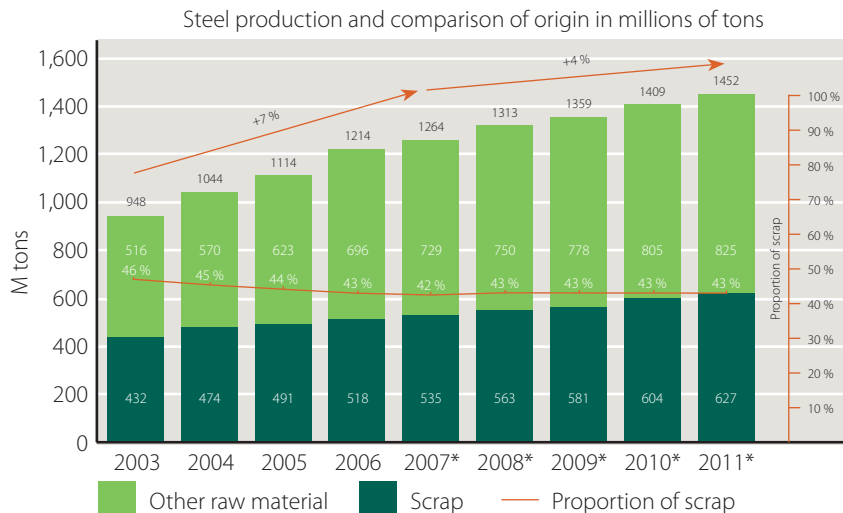
Every recycling chain has its own requirements

The right shear for your production process depends, among other things, on the average volume of scrap to be processed. In addition, it may be of interest to have a shear that can be relocated to different sites, as is possible with the Metso PowerCut Wing. For medium volumes, the new and highly efficient Metso PowerCut is most recommendable. In the case of large volumes and heavy feed material, the shears of the Metso EtaCut® model offers the best choice. Challenge us – our shears will not disappoint you.



The future is with recycling

Market studies indicate that the proportion of recycled steel used is showing an upward trend. Experts believe that this upward trend in the steel market will continue in a stable manner in the coming years. The hunger for steel as a basic raw material for construction and industry will continue to be met to a substantial extent by recycling in the future. This makes it all the more important to have machines that efficiently supply the required raw material for the steel industry.



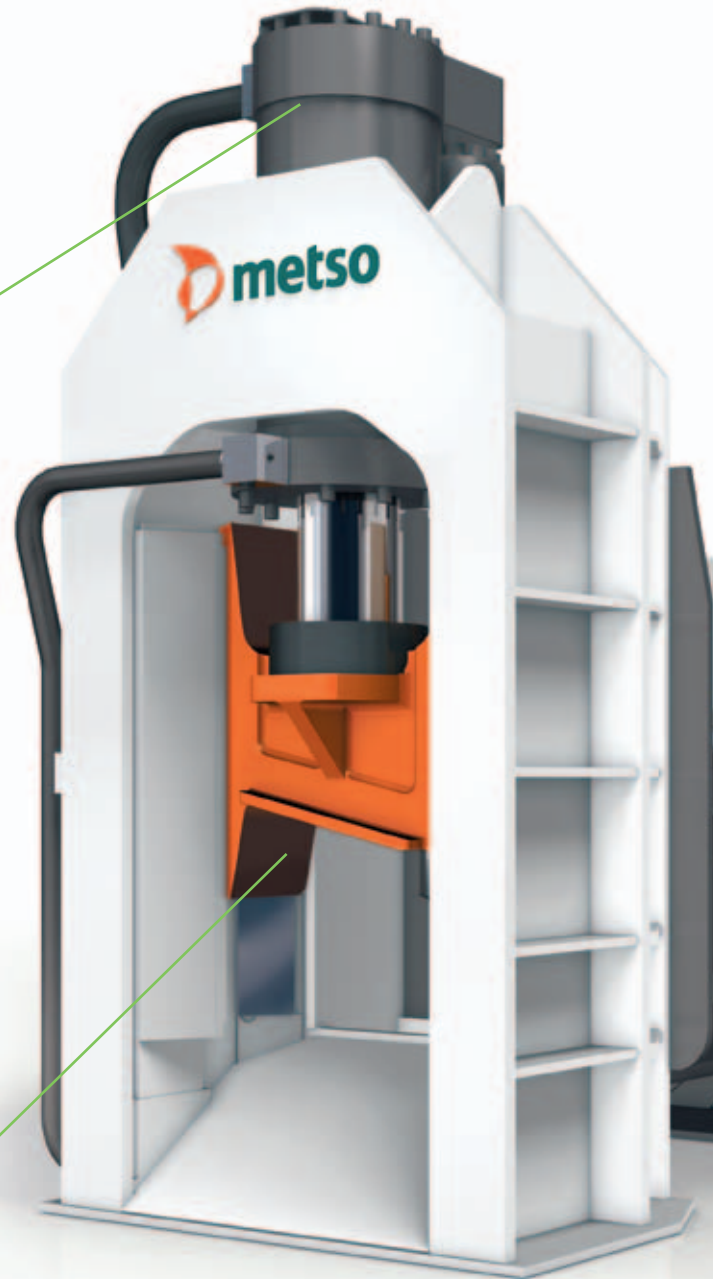
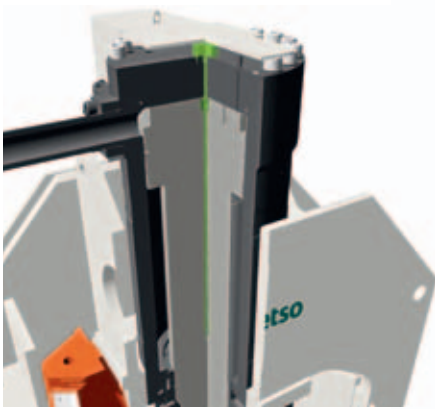
* Estimated
Source: CRU, Booz & Company analysis

Flexible to meet your needs

Metso PowerCut Wing because every scrap yard is different

Ready for any task: Intelligent control systems for optimum process sequencing

Non-contact, path-measuring sensors integrated in the stamper and shearing cylinders, laser-controlled monitoring of the pusher cylinder, and rotary potentiometers on the lid and wing. The control system constantly monitors and optimizes the compacting and cutting process. Numerous programs for different types of scrap can be selected at the push of a button, for instance: full stroke, partial stroke, relative stroke.



Ready for any task: Highly wear resistant materials and easy replacement of wear parts

All parts in the areas where wear is critical are made of highly wear resistant Lindur. This is exactly the same as the well proven technology of the EtaCut® scrap shear: Prismatic guidance (V-guidance) of the blade slide for precise transfer of force. Wear on the external guides is compensated for by simple readjustment, consequently, optimum operation with minimum blade clearance is ensured.



Technical data

Shearing force (t)	630 or 800
Blade width (mm)	800 or 1000
Stamper force (t)	160
Lid compression (middle) (t)	245
Wing compression (middle) (t)	200
Pusher force (t)	120
Feeding bed length (m)	6
Drive	Electric 2 or 3 x 90 kW
	Diesel 230 / 400 kW
Production capacity (t/h)	up to 25

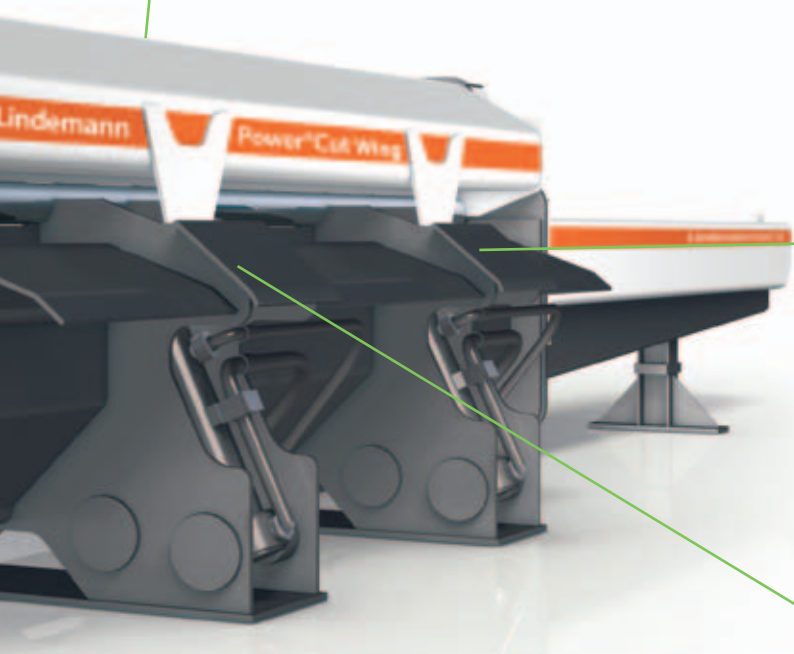


Ready for any task: Critical components are protected in a container

The entire electrical control system, as well as the electric or diesel drive, are supplied pre-installed in a container. This makes a supplementary pump room redundant and accelerates the installation of the machine. Furthermore, these critical and sensitive components are protected both against the weather and mechanical damage.

Ready for any task: The fastest scrap shear in its class

Production capacity under full load conditions in normal operation with material: up to 25 tons per hour and 7 cuts per minute. Separate oil supply circuits for shear and stamper, so they can work at the same time instead of one after the other.

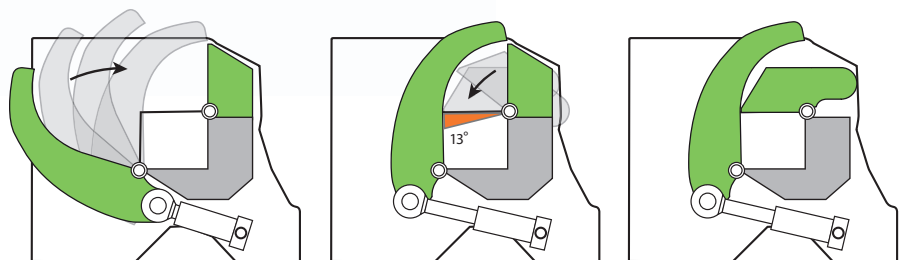


Ready for any task: Highly stable and rigid construction

A honeycomb structure of folded profiles in the press box, wing and lid offers maximum resistance to eccentrically applied forces during compaction. A high-strength pusher with folded profile cover ensures a straight run when baling and feeding. Despite a low installation height, the rigid closed design of the shear frame allows optimum absorption of the reaction forces when cutting.

Ready for any task: Over stroke, only from Metso in this class

As in the case of the EtaCut®, the press lid has an over stroke of more than 13 degrees. Thereby the scrap log is over compressed, so that wear is minimized when feeding to the shear frame.



Strong concept, strong performance and second to none efficiency

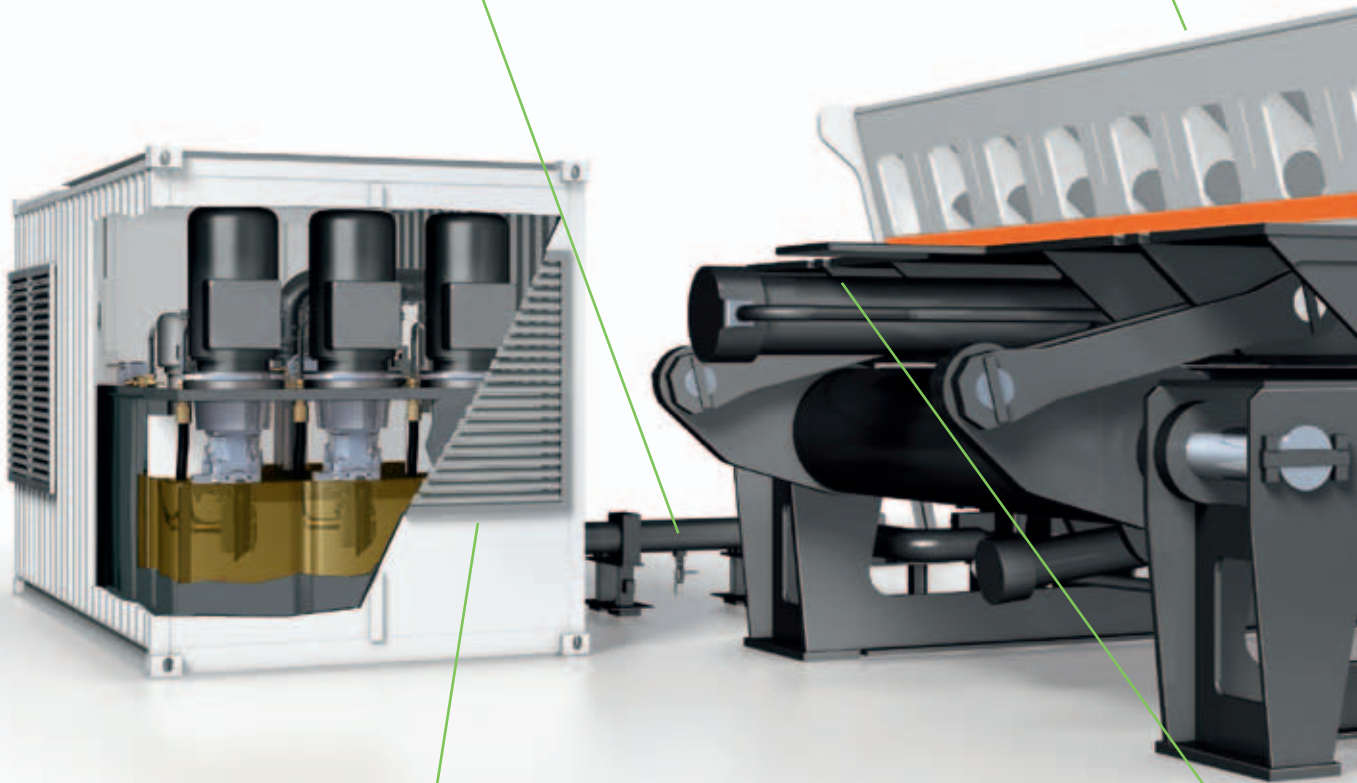
Metso PowerCut 816 and 1025 the efficiency class

Higher efficiency through intelligent hydraulic management

A single control block for the entire machine harmonises the cutting process and is less prone to faults. The combination of high and low pressure pumps incorporating an optimized switching sequence results in faster working cycles with reduced installed driving power. All high pressure pipes are bent instead of being welded, as is usual, so that flow losses are minimized and weak points which could result in leaks are avoided.

Higher efficiency through less downtime

Highly abrasion-resistant Lindur wear plates protect all parts of the machine coming in contact with scrap. A feature unique to Metso Recycling, almost all wear plates are bolted.



Technical data

Shearing force (t)		800 or 1000
Blade width (mm)		800 or 1000
Stamper force (t)		160 or 250
Side compression (t)		250 or 340
Lid compression (middle) (t)		270
Pusher force (t)		120
Feeding bed length (m)		6 or 8
Drive	Electric	3 or 4 x 90 kW
	Diesel	400 kW
Production capacity (t/h)		up to 46



Higher efficiency through a protected drive unit

The control system switchgear, together with the electric or diesel drive, is installed in a container. A separate pump room is, therefore, redundant and the most critical and valuable parts of the machine are protected from falling pieces of scrap.

Higher efficiency through location flexibility

Since the shear concept dispenses with a pump room, the new Metso PowerCut can be relocated with relatively little effort due to the integrated transport device.

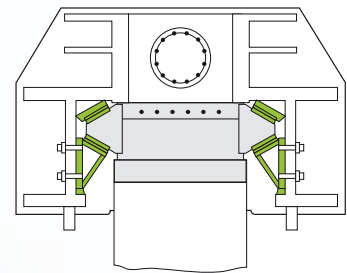
Higher efficiency through precise cutting

Position monitoring is achieved via non-contact sensors that are easier to service than conventional proximity switches. Integrated path measuring systems are used in the stamper and shear cylinder and also in the lid and side compression cylinders. The pusher cylinder is monitored by a protected laser system. This constant monitoring guarantees the precision of the pressing and cutting processes.



Higher efficiency during the cutting process

A breaker bar exerts forces on brittle material in such a way that it will break, even before contact with the upper blade. As a result, wear and the shearing force required are considerably reduced. The blade slide is arranged in an adjustable V-shaped ledge that permits the transfer of shear force with incomparable precision. The shock relief damper reduces the forces that ensue during the cutting process and results in a longer service life of the moving parts.



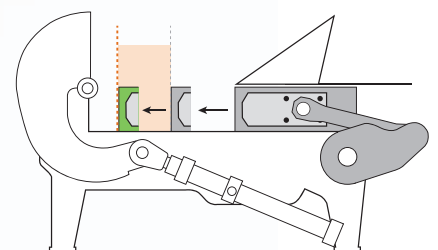
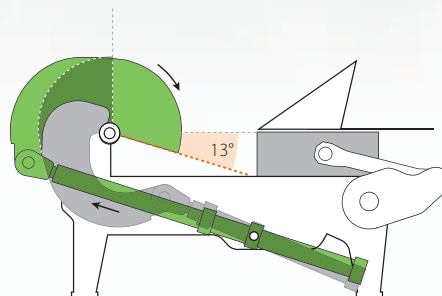
Higher efficiency through planned service

A hydraulic blade tensing device* with online monitoring can reduce the downtime by half when changing blades. The PLC system allows effective monitoring of the hydraulic system to detect even the smallest leaks and defects at an early stage.

* available as an option

Higher efficiency through over stroking

The side compactor and the lid compress the scrap more than the cutting opening requires. This produces an exceptionally high density in the baled scrap and reduces wear when pushing.



Leading the field in terms of reducing downtime

The PLC control system automatically performs pump and cylinder tests so that any defects are detected at an early stage and are indicated at the operating terminal. Consequently, maintenance can be timely planned with a minimum of downtime being necessary. The bolted-on wear plates, made of highly wear-resistant Lindur, contribute to the excellent availability of the machine by halving the downtime during replacement.

The best in terms of speed optimization

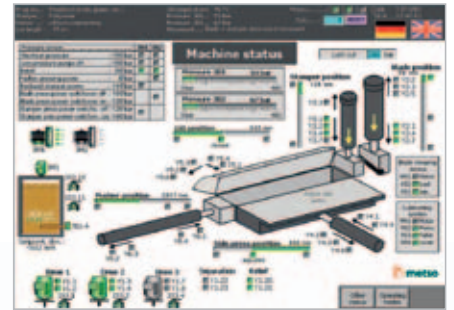
Available only with Metso Recycling: The oil-transfer control system whereby the hydraulic oil from the return line of a cylinder is conveyed directly into another cylinder that operates in the low-pressure range in order to increase the speed of operation.

The best in terms of simplified maintenance

The hydraulic blade tensioning device continuously monitors the upper and lower blades for correct positioning and automatically corrects the blade tension if necessary. This virtually dispenses with manual checking and tightening and results in up to 50% less downtime when replacing, as well as increased operational safety.

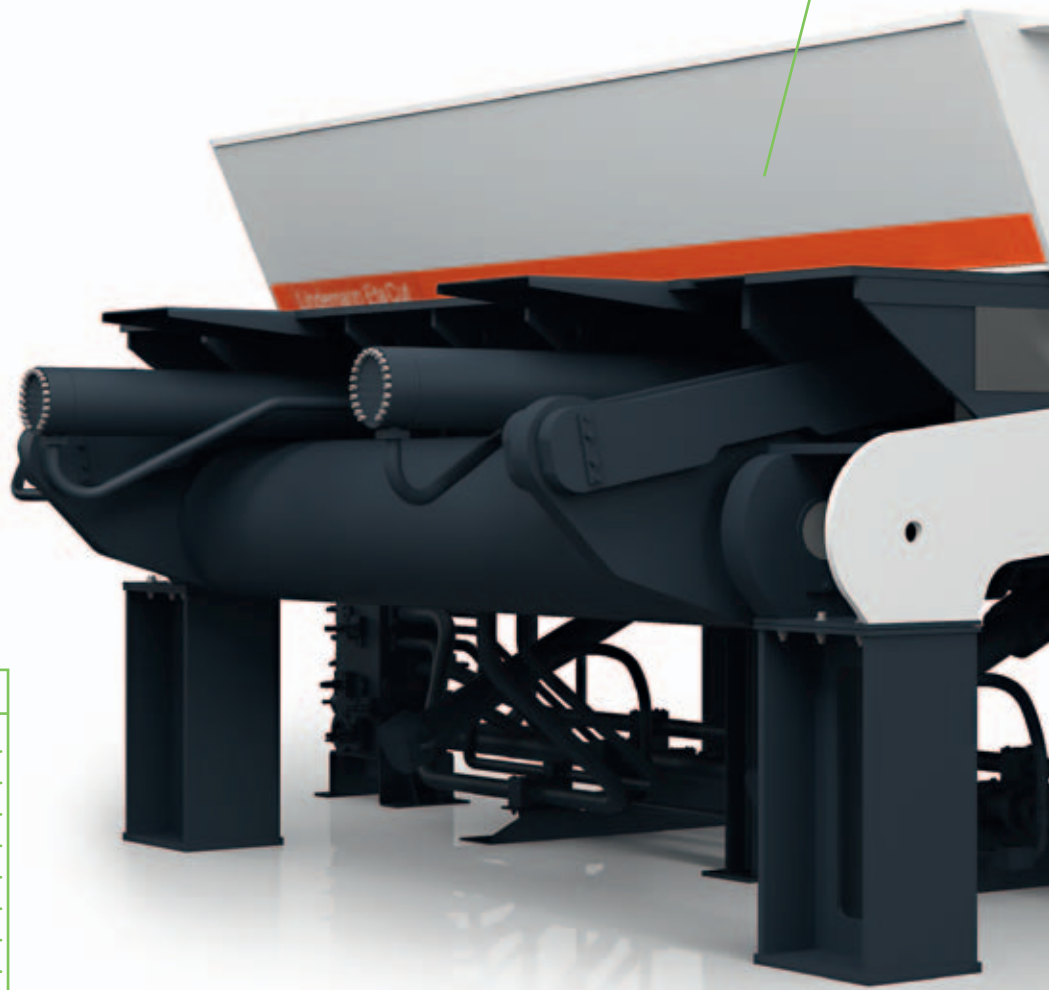
The best in terms of operation

With the multi-data terminal on a touch screen display, Metso Recycling set new standards for the control system and maintenance. Graphic representation, process data visualization and online help in the language of your choice. A series of optimized programs ensures excellent productivity. The operating data can also be displayed on remote computers.



The best in terms of process optimization

This shear can be charged with scrap for the next cycle by feeding onto the closed side press and press lid. The feeding hopper, integrated in the press box, has a larger volumetric capacity than is required for the next cycle. The shear operator can pre-plan the next cut because, when the press box is opened, the scrap immediately drops onto the designated spot. Incorrect loading is avoided and capacity utilization of the shear is increased.



Technical data

Shearing force (t)	800 - 1600
Blade width (mm)	600, 800, 1000 or 1500
Stamper force (t)	250 - 480
Side compression (t)	250 - 500
Lid compression (middle) (t)	270 - 545
Pusher force (t)	120
Feeding bed length (m)	6, 8 or 10
Drive	Electric 3 - 8 x 90 kW
Production capacity (t/h)	up to 85

The best shear of Metso Recycling

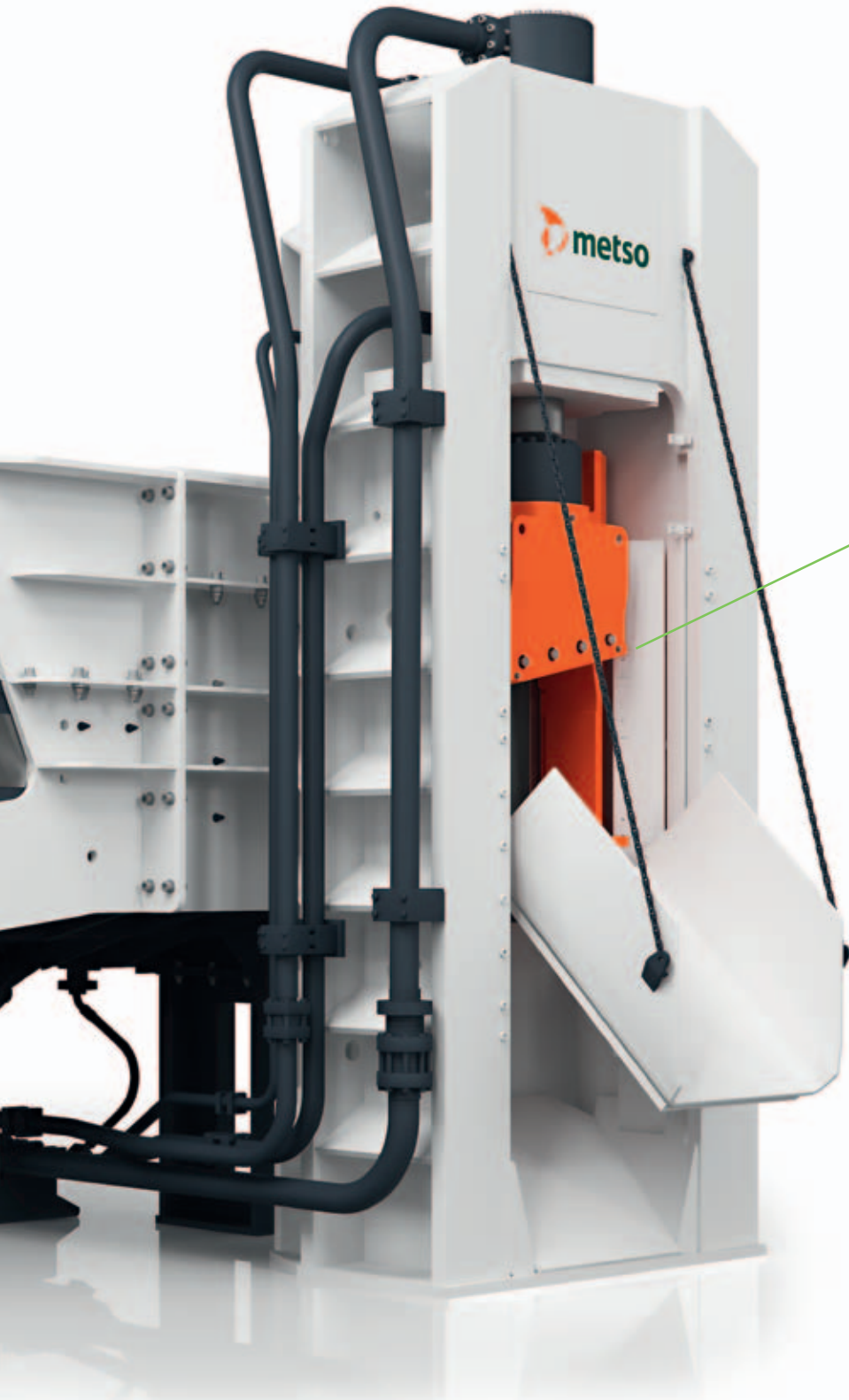
Metso EtaCut[®], the epitome of high capacity and reliability

The best throughput capacity per Euro

When it's a matter of working efficiently and saving energy while maximizing the shear force and installed power, the Metso EtaCut[®] can't be beaten. Referred to the shear force per ton, it has the highest throughput capacity in the world and, at the same time, can execute the most cuts per minute.

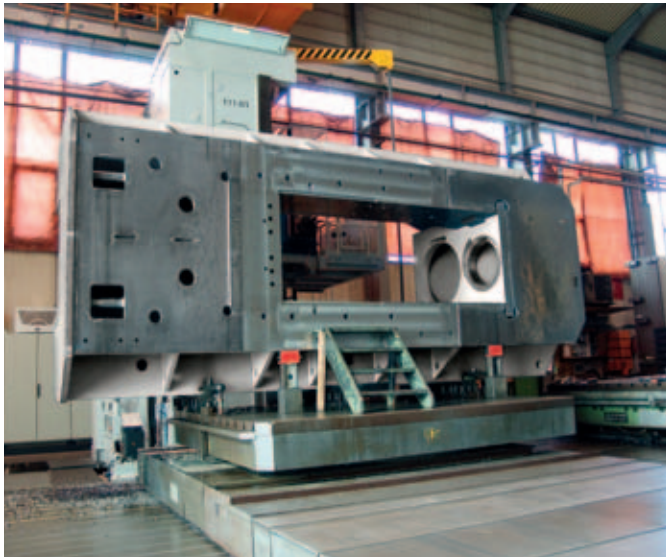
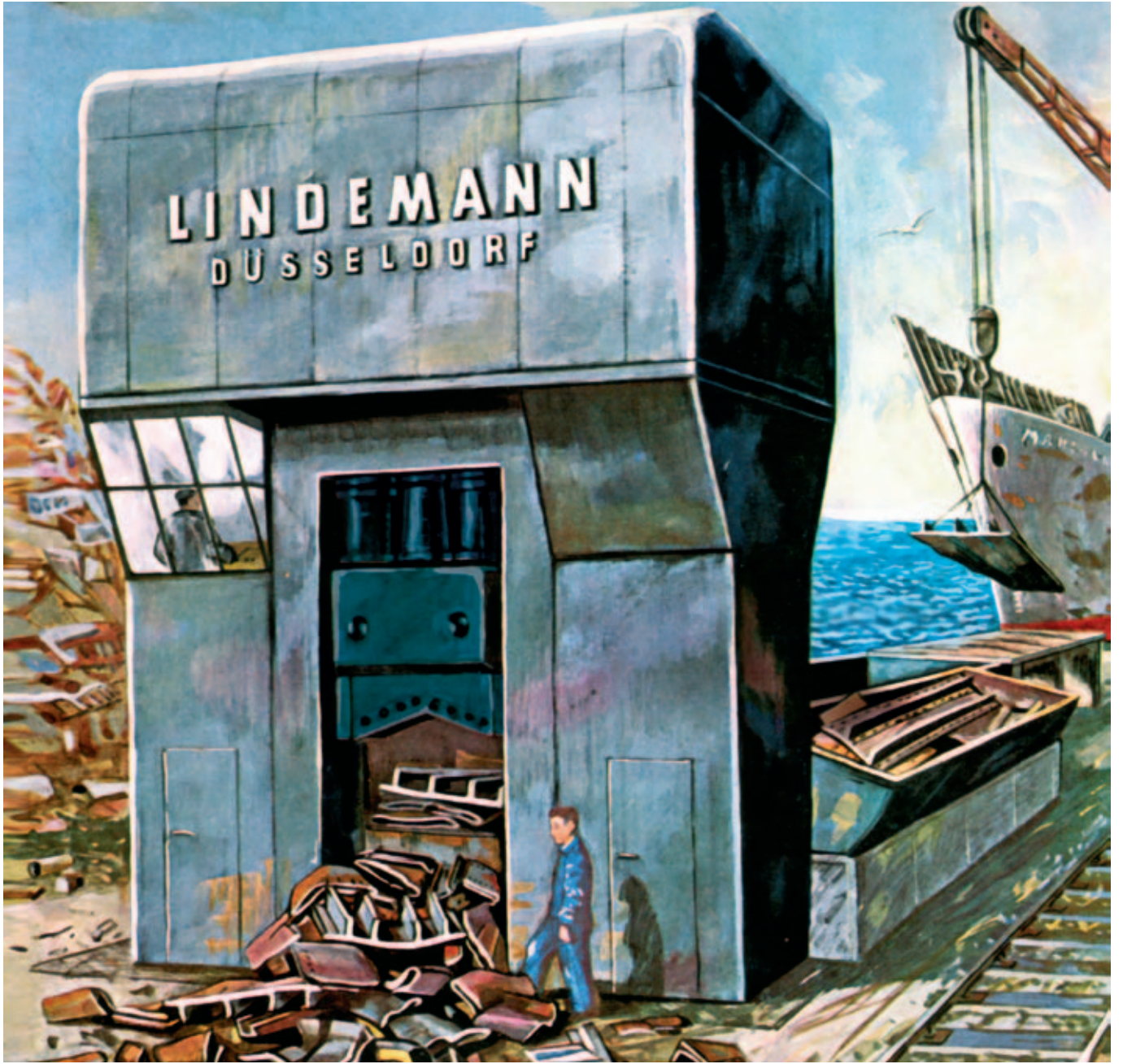
The best in terms of scrap compaction

The side press and lid operate with over stroke to achieve low wear operation. The shear operator has ideal control when compacting the scrap. The optimized kinematics of the side press and press lid ensure that maximum forces are available when needed.



The best in terms of cutting technology

Depending on the type of scrap, the breaker bar at the blade slide can increase the cutting capacity by up to 30 percent compared to other designs, while using the same amount of energy. Hard and brittle scrap breaks when being bent and does not come in contact with the upper blade, resulting in increased service life. The supporting table ensures that shorter scrap pieces are also cut and do not slide out of the shear without being processed. The adjustable prismatic guide of the blade slide and the optimized shock relief damping ensure reliable operation with low wear.





Assembling a shear at the production site in Düsseldorf

Metso Recycling is the shear market leader

We have been ahead of our time for over 90 years

Whatever it is you value most about high-class workmanship – you can be sure that this perfection and attention to detail is reflected in shears from Metso Recycling. Numerous technical innovations that have been setting standards for hydraulic scrap shears in the recycling field for decades have been invented and refined at Metso Recycling – our inventiveness remains undiminished. With the Metso PowerCut series, we have defined new technical milestones, which our customers acknowledge with increasing order placement.

Obtaining the title “global market leader” requires a lot of hard work

The first three hydraulic guillotine scrap shears in the world went to the USA in 1956. Since then, more than 1,500 of our scrap shears have been put into operation worldwide.

We understand your business

Metso Recycling customers have high requirements, and we won't let our customers down. Our developments are aimed at optimizing process chains and supporting your business. Our shears are not just machines, but solutions. We place great value on manufacturing quality and reliability because we know that the failure of a machine costs our customers money. This concentration on quality has earned our machines a virtually legendary reputation that is reflected in the resale value.

The force of Metso is both global and local

As a member of the multinational Finnish group, Metso we are represented all over the world. With more than 150 locations our service teams are available at short notice, even in the most remote corners of the world.

Metso Recycling Equipment

Our range:

Pre-Shredders
Shredders
Shredder Plants
Metal Crushers

Scrap Shears
Turnings Crushers
Briquetting Presses
Double Screw Presses
Anode Crushers

Screen Drums
Scrap Baling Presses
Waste Fine Shredders
Waste Pre Shredders

Metso Recycling Services

Uptime Services

Inspection Services
Parts Services
Repair and Refurbishment
Troubleshooting Services

Performance Services

Process Monitoring Services
Optimization Services
Upgrade Services
Training Services

Project and Engineering Services

Start-up Services
Health, Safety and Environmental Services
Engineering Services
Plant Relocation Services

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We reserve the right to make changes and improvements without notice. „The Metso Scrap Shears – we understand your business, Metso Recycling, December 2013