

Scrap Balers from Metso Recycling  
Metso EtaPress®







Tradition with a modern touch

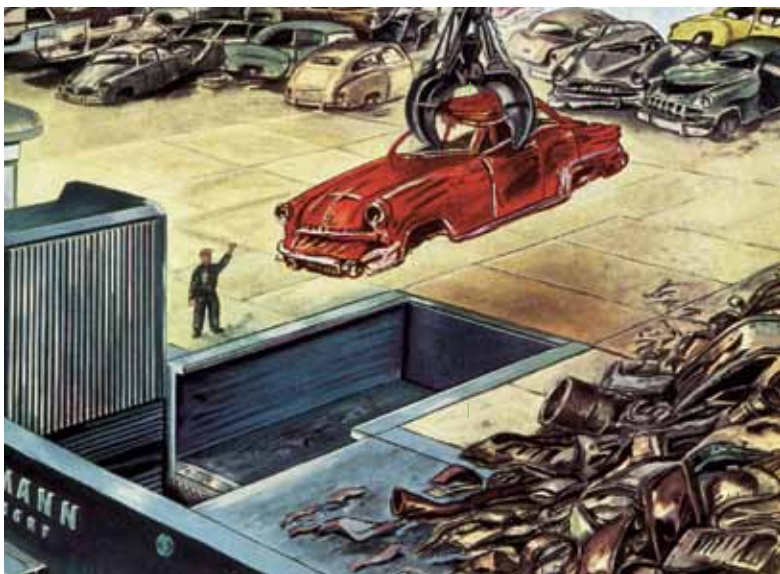
# set new standards in efficiency

## Metso Recycling scrap balers have a tradition of efficiency

Metso EtaPress® III balers are absolutely innovatory and look back on a very long, successful tradition. The story of its success began back in the 1920s when the first hydraulic scrap baler was developed. From then on, they made work so much easier in scrap yards, car body plants, aluminum processing and non-ferrous metal steel rolling mills. It was now possible for companies to press metal off-cuts, cables, wires, long turnings or mixed scrap into bales efficiently. The bales with optimized logistics aspects and outstanding melting properties makes them preferred feed material for steel mills, foundries and steel rolling mills.

## Metso EtaPress® III balers: profitability in a new dimension

Metso Recycling is still a step ahead of the competitors, with the EtaPress® III, the latest generation of scrap balers. The balers set new standards not only in terms of profitable utilization of scrap but also in operating safety, flexibility and operation costs. The EtaPress® III series is unique on the one hand with its holistic technological concept and on the other hand particularly when it comes to operator guidance with the user interface. It stands out on account of the same properties that have distinguished the brand for more than 90 years: quality, durability and resilience – with a particularly high level of machine availability.



Heavy duty lid type baler



Scrap baling press  
Metso  
EtaPress®

1920

1930

1940

1950

1960

1970

1980

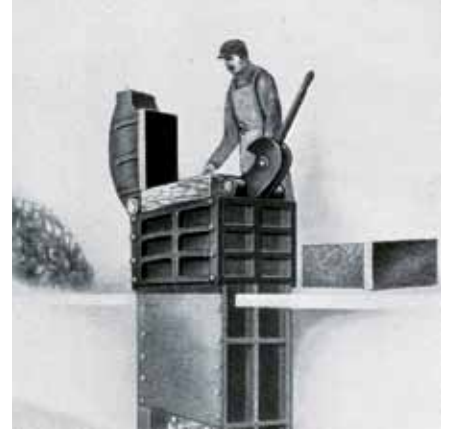
1990

2000

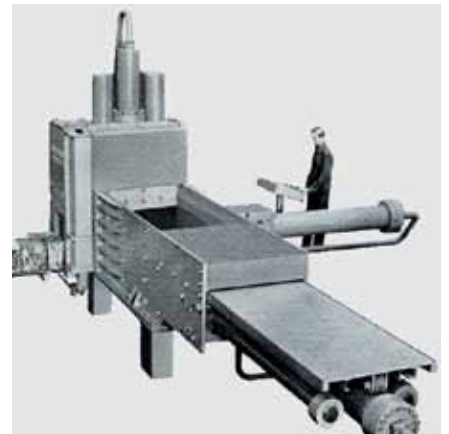
2010

2011

2012



Metal baling press "MINAO"



Baling press  
"SAWES"



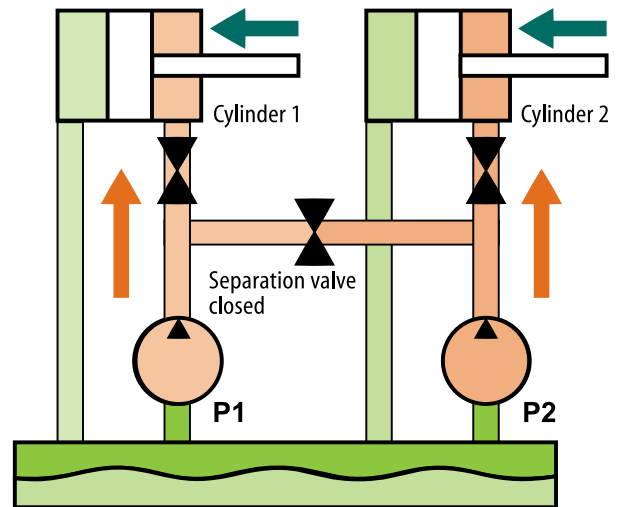
Perfectly adjusted  
for top technical and profitable  
performance

**Triple action for best results**

Metso EtaPress® III works according to the principle of three-sided compaction with a hydraulic operating pressure of up to 350 bars. The first striking feature is the optimized construction of the compression chamber made of smooth thick plates for the Metso EtaPress® III 22 to 44 and the design of the compression units with their adjustable mechanical stops. They provide more stability and durability as well as operation safety under adverse operating conditions. This applies equally when working in single shifts or round the clock. The side parts of the unit are not only screwed but also positively connected with a key and groove joint – for even more rigidity.

**Impressive peak performance**

Metso EtaPress® III is special, above all in terms of profitability. Peak load monitoring and optional energy saving settings are responsible for favorable energy consumption and low operating costs. The short cycle times of the Metso EtaPress® III realize a higher output compared to the installed power. This results of the clever control system with oil transfer and hydraulic separation of the pump flows to move several cylinders at the same time. The contact free positioning system is not only responsible for optimized cylinder control but also bypasses the frequent interruptions caused by proximity and limit switches from dirt or falling scrap.



Hydraulics drawing





**Perfect for all possible applications,  
as well as highly efficient**

Results that are really worth seeing: compacted bales produced by the Metso EtaPress® III offer exemplary efficiency above all on account of their high density, this makes them preferred feed material for steel mills, foundries and steel rolling mills. The baler processes an extensive range of scrap, from car body sheet metal off-cuts, high-strength plates, thin sheet wastes, trimmings or cutting plates through to cables, wires, long turnings or even mixed scrap, so that these materials can be put to efficient use.



**Bale density (kg/dm<sup>3</sup> - depending on the material)**

Fe	up to 3.5
Al	up to 1.2
Cu / Ms	up to 4.0

# It just keeps on running, and running and running ...

## Safe and reliable

Together with its durability, one of the great advantages of the Metso EtaPress® III is its reliability, warranted by the contact-less positioning system, or the rigid thick-plate design of the compression chamber for the Metso EtaPress® III 22 to 44, whose optimized buckling resistance can even withstand overfilling. Wear plates with a special washboard surface makes a special contribution to increasing machine safety by reducing the risk of material jamming the machine. Thanks to the visualization based simple user interface, the machine can be operated almost intuitively. The display only shows the elements that are relevant to the selected function.

## Outstanding Quality

The Metso EtaPress® III scrap baler stands out with a long service life and low wear thanks to the individual detailed solutions. These include improvement of the V-blades with optimized blade geometry and direct lubrication for efficient cutting of protruding material and the full-surface lubrication of the compression chamber base for the Metso EtaPress® III 33 to 66 and the large number of lubrication points on moving parts, resulting in a long service life and low wear.

Together with the control, the new compact hydraulic unit with pumps submerged in oil results in a calm, quiet-running machine. The "Soft Motion" control protects the hydraulic system by ensuring ideal interaction of pumps and valves, and optimizes the performance of the compression units thanks to improved acceleration and deceleration phases.

## This is how it operates

Scrap is fed into the large-sized opening

V1 compresses the material horizontally, cutting off any protruding scrap

V2 compresses the material vertically

V3 finishes off the bale

The door opens and V3 pushes the bale out of the box

Positioning system

Logic block, accessible from all sides

Hydraulic pre-tensioned tie-rods absorb the high forces involved in pressing the bale. This leaves the compression chamber free of dynamic load







Lubrication unit installed inside of compactor 1 for continuous lubrication of the press box bottom. The V-blade with optimized cutting geometry and direct lubrication for the EtaPress® III 33 to 66

Exactly adjustable clearance of the compression units at the mechanical stops prevents any tailing even with increasing wear

The upper side of compression unit 1 is fitted with replaceable screwed wear plates – for fast service

Travelling lubrication of the compression chamber floor thanks to compression unit 1

Long guides for precise compaction



Wear plates with special corrugated profile are made of high strength long-life LINDUR. They are screwed for simple fitting and removal



Horizontal space-saving door – even for ejecting oversized bales

A perfect fit

# from installation through to maintenance

## Right from the start

Like the Metso EtaPress® III good ideas and efficient solutions stand out above all for one reason: they have been well thought out from beginning to end. Where facts speak for themselves: it saves you time and nervous energy already during installation and commissioning.

## The advantages in detail

- High level of pre-assembly ex works for swift installation
- Compact electronics requiring little space
- Field bus connections for less wiring and checking
- Good accessibility for making adjustments
- Machine adjusted without programming units – for simple service

The training and familiarization process also takes up minimum time, an optimized user interface and online help make the machine easy to operate, providing great assistance during every day procedures in combination with the various operating modes tailored to the specific purpose.

## All working perfectly

Time is money – particularly in maintenance and service time. The Metso EtaPress® III excels here above all with its low downtime.

The advantages at a glance:

- Dynamic oil level monitoring
- Integrated pump and cylinder test
- Computer-controlled central lubrication
- Visualization of all operation- and maintenance-relevant parameters on the integrated touch panel
- Optional wear monitoring system WearCon for timely planning of wear plate replacements
- Screwed wear plates for swift replacement
- Standardized screw sizes for reduced tool requirements for the Metso EtaPress® III 22 to 44

If faults should arise, our service technicians are not far away than your phone. This makes monitoring, service and maintenance even simpler.



Control panel





## Powerful pumps provide extra energy savings

### Hydraulics is a powerful heart

The compact, space-saving hydraulic unit with pumps submerged in oil is definitely the heart of the machine. The hydraulic system, driven by a pump package consisting of axial piston pump and internal gear pump, only needs minimum oil quantities thanks to the high operating pressure of up to 350 bars. The low operating temperature and a bypass filter prolong the oil service life. Furthermore, hydraulic oil for lubricating the machine is continuously taken straight from the tank. This in turn is topped up regularly so that the oil is permanently refreshed with constant quality levels so that major periodic oil change is not necessary. At the same time, this saves oil. The hydraulic unit is a well conceived, energetically efficient drive system with unequalled cycle times.

By the way, if necessary we can install the hydraulic and electric systems in a weatherproof container.

### Advantages of the hydraulic system:

- 2-chamber tank with 5 µm bypass oil filtration and cooling
- Pumps submerged in oil for lower noise level
- Very few maintenance-intensive screwed unions
- New "Soft Motion" control for optimized acceleration and deceleration of the compression units
- Hydraulic separation of the pump flows for synchronous control of different compression units
- Integrated cutting impact attenuation
- Oil transfer for high energy efficiency
- Integrated cylinder and pump test
- Service reduced positioning system in the cylinders

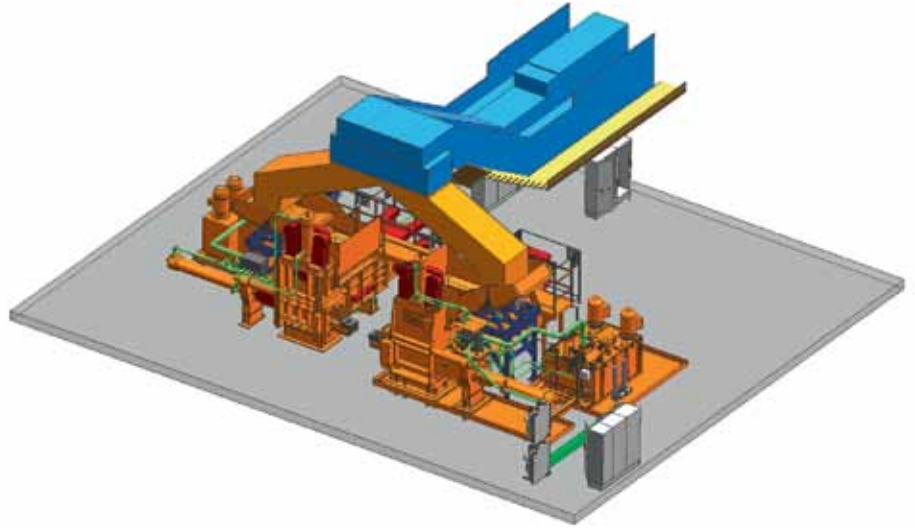
*The hydraulic system is the heart of the Metso EtaPress® III and it plays a major role in the machine's efficiency:*



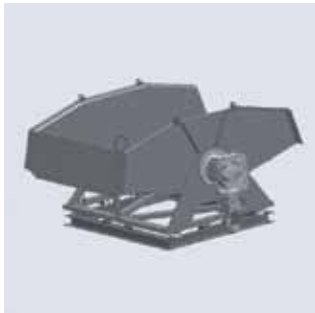
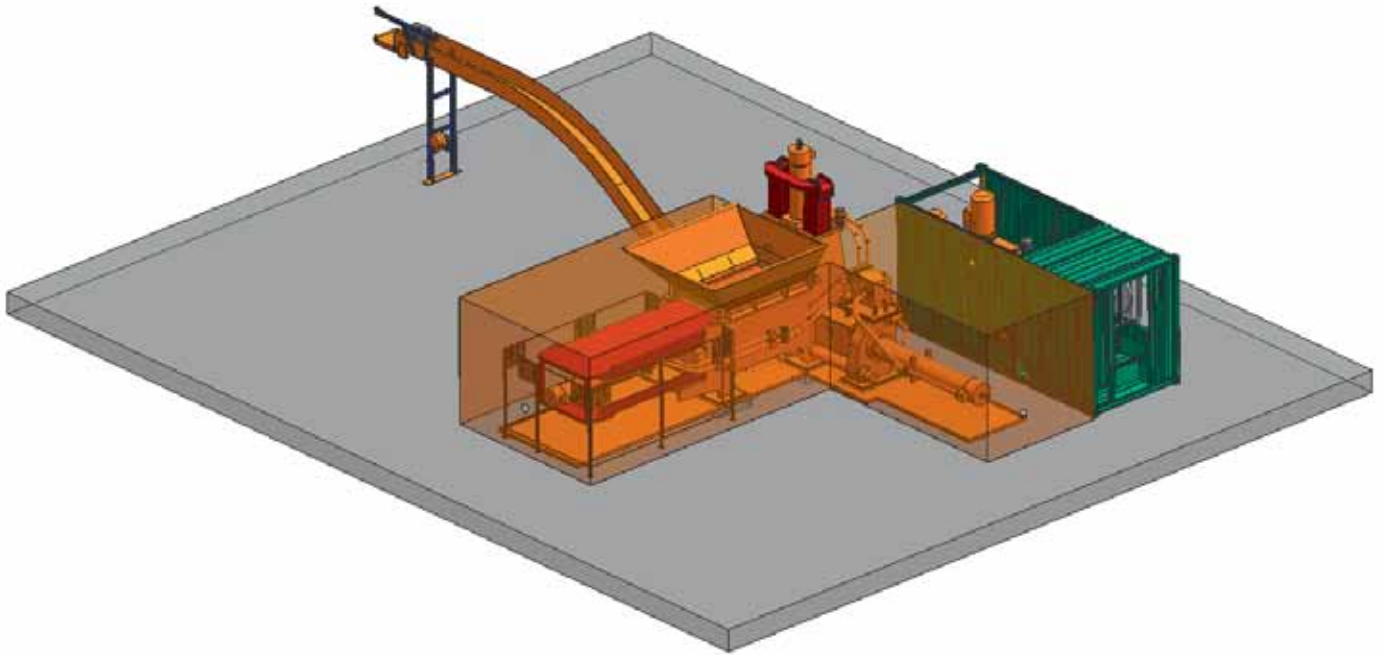
# Precise fit

## Layouts according to your requirements

To obtain the best possible benefit from the advantages of the Metso EtaPress® III scrap baler, the machine must be embedded in the most suitable position in the periphery. Metso Recycling works as your partner, no matter whether you need the machine in automotive production or on a scrap yard, our planning process is based on your specifications, perfectly tailor-made to your requirements. As an option, we not only integrate the weighing stations, belts, bale slides and distributors in your individual concepts but also realize a reliable control of the system – thanks to Fieldbus later additions present no problem. Digital surveying systems combined with 3D CAD bring us to the ideal solution, even for tricky, confined erection situations. Everything works perfectly without a hitch.







**Weighing stations**  
for automatic baler  
feed



**Belts**  
for continuous scrap  
feed – or for discharge  
of the bales



**Hydraulics container**  
for compact, weather-  
proof protection of  
hydraulic drive and  
electric system – even  
without a permanent  
pump house

**Bale slides**  
to ensure that the  
bales arrive the load-  
ing point

## 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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