TAURUS

SINCE 1964...
ALWAYS A STEP AHEAD!

TAURUS

60 YEARS ANNIVERSARY
1964-2024

TAURUS

60 YEARS ANNIVERSARY 1964-2024

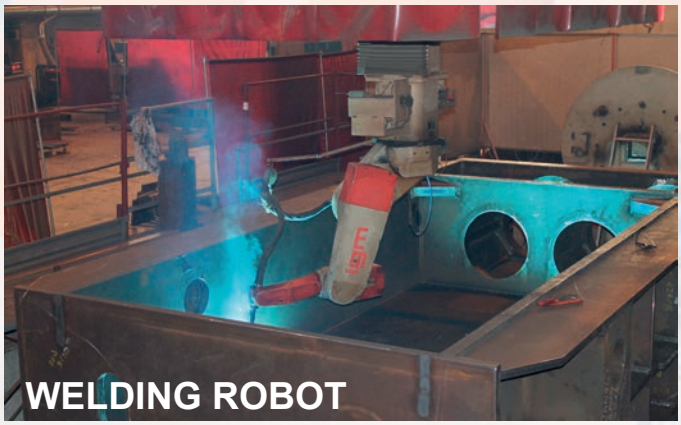
... many sell machines...

... few build machines ...

Nothing will ever be the same again.
It is time to seize renewed opportunities from changing events, to identify new paths and to develop ideas and techniques that are evolving from the past.
We are at the beginning of a new time.
C.C.

THE FACTORY

MECHANICAL PROCESSING



WELDING ROBOT

STEEL WORK

TAURUS

6000 P.S.I.

THE POWER CONVERTED IN PRODUCTION COMPONENTS, CYLINDERS, STRUCTURES DESIGNED FOR 6000 P.S.I. HYDRO - TECNOLOGY

- less energy consuption
- best performance
- best efficiency

ASSEMBLING

TRANSPORT

TRAINING AND TESTING

TAURUS

since 1964...

TAURUS is a historic brand in the scrap processing market. Since the 1960s TAURUS has been involved in the study, design, development and production of plants and machines intended for processing ferrous and nonferrous scrap. Giovanni Colombo and Dino Giuliani, founders of the company can be counted among the forerunners of compression and shearing techniques and technologies applied to scrap metal processing machines.

Since the 1980s, through the experiences gained and cooperation with Peter Beyeler, a deep connoisseur of the needs and requirements of the industry, TAURUS has been studying, designing, building and marketing "shear balers" equipped with the original "oscillating wing" compression system. Since then, more than 1,000 shears have been installed worldwide under the TAURUS brand name.

In 1991, TAURUS began the design and production of the MILLFEEDER (scrap bale pre-shredder intended to feed hammer mills). The BRAVO PRE-SHREDDER branded TAURUS is the undisputed leader in the world.

In the early **2000s**, the TR continuous-feed chute shear joined the production.

In 2010, TAURUS began the study and development of the hammer mill named REDMILL, and **in 2015** TAURUS introduced the the innovative metal refining module REDFINER.

Since then, TAURUS-branded production is divided into three product lines:
-BLULINE "shear balers" with the swinging wing compression system;
-BLACKLINE for the continuously fed inclined shears;
-REDLINE for the preshredders, refiners and hammer mills..

In 2018, TAURUS started construction of CAT, the first shear baler mounted on a track vehicle.

Now in February 2024, on the occasion of its 60th anniversary, TAURUS, renews and completes its range of shear balers, and introduces the new shear "ESSE" with open box and continuous feed, mounted on a track vehicle.

TAURUS

60 YEARS ANNIVERSARY 1964-2024

always a step ahead!

BLULINE

SHEAR BALERS
FIXED

EVO - KAPPA - COMPACT - RAPID - QUATTRO

SHEAR BALERS
on track vehicle

CAT - CATJ

SHEAR BALERS
MOBILE

ELLE

BLACKLINE

INCLINED SHEARS

TR

PRE-SHREDDERS

REDRIPPER BRAVO

REDLINE

REFINERS

REDFINER

HAMMER MILLS

REDMILL

TAURUS
Bluline:

Shear balers sold all over the world. In each of these machines you will find the experience and know-how of a company that has been at the cutting edge of technologies production for the recycling market since the 1960s.
All TAURUS machines are designed to achieve maximum performance while respecting safety and environmental laws. High technology, versatility and ease of use are the distinguishing features of TAURUS-branded production.
Each product represents the highest expression of research and innovation.

THE ORIGINAL **TAURUS** SHEAR BALER

The shear head consists of an electro welded monolithic structure. All the inner surfaces of the shear head and the front surface of the mobile blade holder, in direct contact with scrap, are protected by replaceable wear plates. The sliding guides of the mobile blade holder are made of synthetic material loaded with lubricants suitable for absorbing debris and solid particles to prevent sliding seizures. Adjustment of the guides, to eliminate backlash, is done with a simple and unique system, acting from outside the structure.

The cutting force is transmitted to the mobile blade holder by two double-acting cylinders. This solution minimises contact friction between the guides. The cutting system is more balanced making the wear on the guides significantly reduced. The blades are in a housing protected by a Taurus designed sub-blade and counter-blade to distribute the specific compression load correctly. High-strength materials, integrated into the structure of the shear and mobile blade holder, protect the blade housing from deformation and early wear.

The pre-compression box adopts the tried and tested **SBxc** compression system, which has been improved to reduce scrap preparation time and optimise the transmission 'curve' of the compression forces.

Adjustments made to the position of the cylinders, improved high-stretch material on the lever arms, and adjusted lever arm geometry further improve its function and improves overstroke.

The new **SBxc** pre-compression box is particularly solid and robust. The base and wings have a sandwich structure with a cross-linked core to increase the bending and torsion stiffness value, ensuring springback and preventing permanent deformation. Submerged-arc welded parts ensure consistency and uniformity to the weld seams and high resistance to fatigue stress.

The new hydraulic system combines low consumption loading with high performance. The set of valves constituting the system and mounted on the distribution panels is an appropriate compromise between the use of traditional drawer elements and the adoption of logic elements.

Mechanical limit switches have been eliminated, replacing them with angle sensors **KNEE**, and laser position controls.

The application of the integrated multifunctional '**SIRL**' system allows, among other things, the speed of the wings to be controlled to avoid shocks and vibrations.

The **TS** remote diagnostics system, which is installed standard on all shears, monitors the machine in real time by our service department.

THE ENTRY LEVEL

A machine that can do anything, that produces bales from light scrap, E.L.V and collection scrap to send to crushers, and that can shear heavy scrap and demolition scrap 'furnace-ready' with low running costs:

AN INVESTMENT THAT PAYS ITSELF QUICKLY

SHEAR BALER "EVO"		E662	E762
Shear cylinders	n.	2	2
Cutting force	t	650	750
Clamp		-	-
SB: swinging wings compression system		SBxc	SBxc
Over stroke on both wings with 90° stop		-	-
Open box dimension	mm	2500x6100	2500x6100
Bale dimension	mm	900x600	900x600
Cylinders for each wing	n.	2	2
Main compression cylinder	t	150	150
Electric motor	kw	160	160
Diesel engine (on demand)	hp	280	280

THE SHEAR BALER ADAPTED TO THE TIMES

The scrap industry is undergoing a radical change, to which dedicated technologies must adapt. So no more foundations, ancillary structures and bureaucratic headaches. The shear baler can enter the scrap yard without disturbing production, be placed on the floor and operate within a few days of delivery. When its useful life is over, it can be dismantled quickly.
"KAPPA" a monolithic machine that does not require any special permits or foundations; a machine that is quick and easy to position, handle and reposition.
The "KAPPA" line of shear balers are composed of a single, self-supporting monolithic body.
"KAPPA" is equipped with the original TAURUS SBxc swinging-wing compression system with over stroke on both wings.

"KAPPA" a machine for all needs:
- light scrap bales, E.L.V and collected scrap
- of "furnace-ready" heavy scrap.

SHEAR BALER "KAPPA"		K873	K973
Shear cylinders	n.	2	2
Cutting force	t	850	950
Clamp		-	-
SB: swinging wings compression system		SBxc	SBxc
Over stroke on both wings with 90° stop		-	-
Open box dimension	mm	2500x7200	2500x7200
Bale dimension	mm	900x600	900x600
Cylinders for each wing	n.	3	3
Main compression cylinder	t	150	150
Electric motor	kw	250	250
Diesel engine (on demand)	hp	400	400

RENEWAL IN TRADITION

The COMPACT shear baler is a versatile machine, suitable for processing different types of scrap.
The COMPACT shear baler has a single monolithic body on a self-supporting frame, requiring no foundations and no special permits.
The shear baler in this category is easy to install and locate, requires no special permits, costs nothing to move because it leaves everything as it was and requires no changes where it is placed.
At the rear of the machine, on the opposite side of the shear, is a protected structure that supports the longitudinal compression cylinder and which supports the electric/diesel motor, electrical and hydraulic systems necessary for its automatic operation. The rear structure is protected by a cover in high resistant steel as well as the shear head and the wings cylinders.
The 'COMPACT' shear baler is equipped with the original TAURUS SBxc swinging wing compression system.
In addition to shearing scrap, the 'COMPACT' shear baler can also produce bales that are ejected automatically.

SHEAR BALER "COMPACT"		C107	C117
Shear cylinders	n.	2	2
Cutting force	t	1000	1100
Clamp	t	310	310
SB: swinging wings compression system		SBxc	SBxc
Over stroke on both wings with 90° stop		-	-
Open box dimension	mm	2500x7200	2500x7200
Bale dimension	mm	900x600	900x600
Cylinders for each wing	n.	3	3
Main compression cylinder	t	180	180
Electric motor	kw	2x160	2x200
Diesel engine (on demand)	hp	560	560

SHEAR BALER *FIXED* “RAPID”

TECHNOLOGY AND EXPERIENCE

A concentration of technology and experience, strength and speed, sturdiness and constructive simplicity, reliability and safety. RAPID shear balers are synonymous with production, low consumption and high performance. RAPID is intended for heavy work, for those who demand clean, high-density quality scrap. Heavy-duty machines (HEAVY-DUTY) are suitable for shearing scrap metal of a particular consistency, like demolition, production scrap, stamping and lamination trimmings, pantograph sheet metal scraps, rod, rails, etc.
“RAPID” consisting of a single monolithic structure is easy to install and reposition. In the rear part of the machine, on the opposite side of the shear, is located a protected structure which supports the longitudinal compression cylinder and which supports the diesel/electric motor, the electrical and hydraulic system necessary for its automatic operation.
The rear structure is protected by a cover in high resistant steel as well as the shear head and the wings cylinders.
The shear is equipped with a support frame that works simply resting on the ground and does not require foundations.

SHEAR BALER “RAPID”		R12	R13
Shear cylinders	n.	2	2
Cutting force	t	1200	1300
Clamp	t	310	310
SB: swinging wings compression system		SBxc	SBxc
Over stroke on both wings with 90° stop		-	-
Open box dimension	mm	2900x7200	2900x7200
Bale dimension	mm	1000x700	1000x700
Cylinders for each wing	n.	3	3
Main compression cylinder	t	180	180
Electric motor	kw	2x200	2x200
Diesel engine (on demand)	hp	560	560

HEAVY DUTY

The purpose of the shear balers is simple: to cut and densify scrap to optimize storage space, reduce transport costs and supply the scrap "ready to furnace".
TECHNIQUE is our savoir-faire, the ability to design and build by applying the knowledge gained through experience, after having deepened production processes.
TECHNOLOGY is our way of knowing how to innovate and do research. It is the application of processes and solutions involving advanced technical and scientific knowledge.
TECHNIQUES AND TECHNOLOGY are applied in the study and development of ever new ideas. The scrap market is undergoing radical changes to which the scrap industry and machinery must adapt. Today, a shear baler is not only chosen for its productivity but also for its versatility, for running costs, for the costs of auxiliary structures, for foundation costs, for the possibility of easy relocation, for ease of maintenance, for safety, and above all for an investment that holds its value and pays for itself quickly.
All of this is the QUATTRO, a shear baler born for the future.
A big machine with bigger performance, born after more than 50 years, during which we have invested, experimented, designed and dedicated ourselves to the construction and development of scrap shears.

SHEAR BALER "QUATTRO"		Q13	Q14	Q16
Shear cylinders	n.	2	2	2
Cutting force	t	1300	1400	1600
Clamp	t	310	400	400
SB: swinging wings compression system		SBxc	SBxc	SBxc
Over stroke on both wings with 90° stop		-	-	-
Open box dimension	mm	2900x8300	3200x8300	3200x8300
Bale dimension	mm	1000x700	1100x800	1100x800
Cylinders for each wing	n.	4	4	4
Main compression cylinder	t	150	180	180
Electric motor	kw	2x250	3x200	3x200
Diesel engine (on demand)	hp	2x400	-	-

SHEAR BALER *ON A TRACK VEHICLE* "CAT"

"...IF THE SCRAP DOESN'T GO TO THE SHEAR... THE SHEAR GOES TO THE SCRAP"



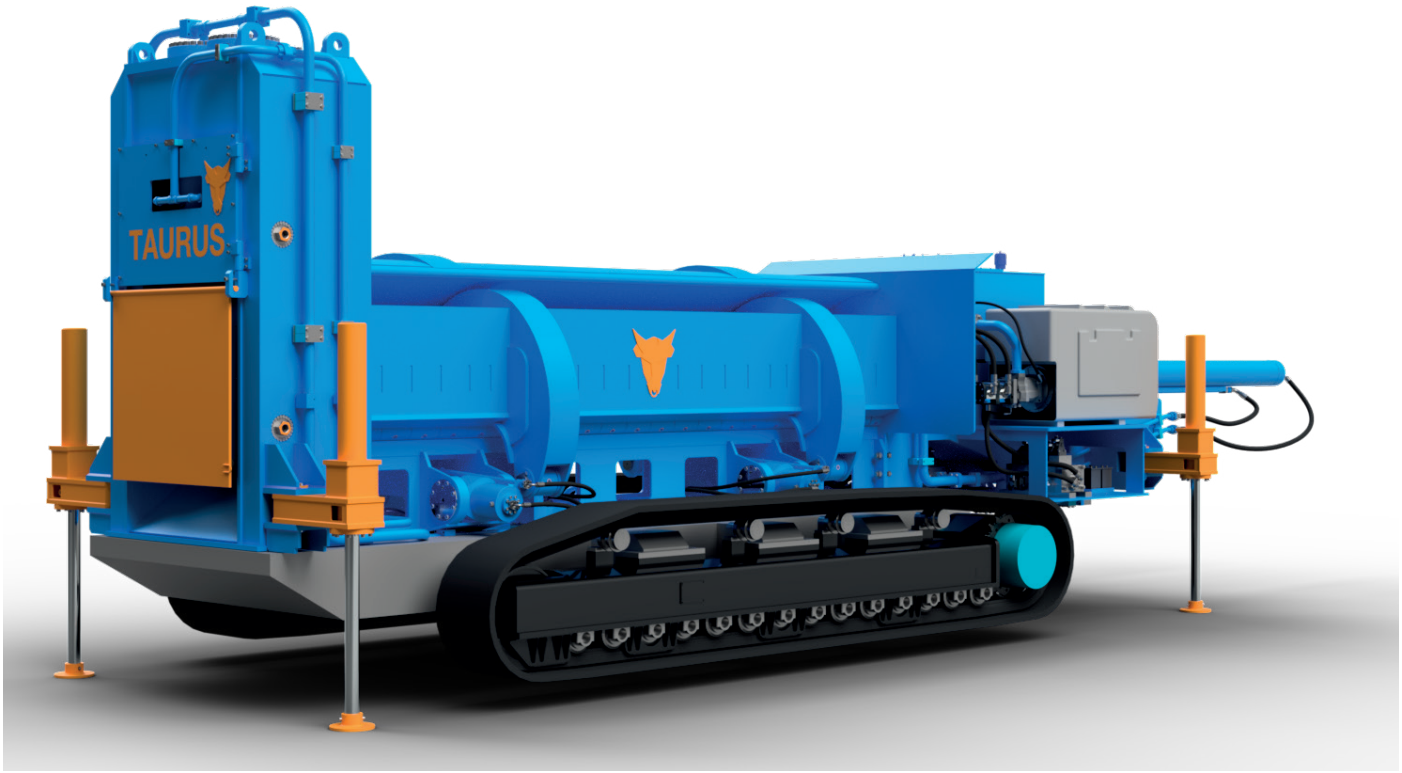




"CAT", the shear baler on trucked vehicle that adapts to your working needs. You will decide where you want to make it work, it will follow you.
It's not a new idea, it's just a brilliant idea.
The shear baler has 2 independent remote controls, one for the shear baler and the other one for tracks:
"2" is for safety,
"2" is for ease of use;
"2" is for not making mistakes,
"2" is because there are 2 machines that make up the unit.
The shear baler "CAT" series are made up of a single self-supporting monolithic structure.
The "CAT" shear is equipped with the original TAURUS SBxc compression box with over-stroke on both wings.

SHEAR BALER "CAT"		CAT7	CAT8	CAT10	CAT12	CAT14
Shear cylinders	n.	2	2	2	2	2
Cutting force	t	750	850	950	1250	1400
Clamp		-	-	-	-	-
SB: swinging wings compression system		SBxc	SBxc	SBxc	SBxc	SBxc
Over stroke on both wings with 90° stop		-	-	-	-	-
Open box dimension	mm	2500x6100	2500x7200	2500x7200	2600x7200	2600x7200
Bale dimension	mm	900x600	900x600	900x600	1000x600	1000x600
Cylinders for each wing	n.	2	3	3	3	3
Main compression cylinder	t	150	150	150	150	150
Diesel engine (on demand)	hp	280	400	400	500	500

THE UNIVERSAL SHEAR



CATJ transportable shear balers are equipped with 4 lifting cylinders to ensure ground alignment. Furthermore, the cylinders allow the lifting of the shear permitting the loading and unloading on the means of transport, whether it is a tracked vehicle or a swan neck trailer.
CATJ can work both resting directly on the ground or on the tracked vehicle.
The shear baler "CATJ" series are made up of a single self-supporting monolithic structure.
The CATJ shear is equipped with the original TAURUS SBxc swing-wing compression box with over stroke on both wings.

SHEAR BALER "CATJ"		CATJ7	CATJ8	CATJ10	CATJ12	CATJ14
Shear cylinders	n.	2	2	2	2	2
Cutting force	t	750	850	950	1250	1400
Clamp		-	-	-	-	-
SB: swinging wings compression system		SBxc	SBxc	SBxc	SBxc	SBxc
Over stroke on both wings with 90° stop		-	-	-	-	-
Open box dimension	mm	2500x6100	2500x7200	2500x7200	2600x7200	2600x7200
Bale dimension	mm	900x600	900x600	900x600	1000x600	1000x600
Cylinders for each wing	n.	2	3	3	3	3
Main compression cylinder	t	150	150	150	150	150
Diesel engine (on demand)	hp	280	400	400	500	500
Lifting Jacks	n.	4	4	4	4	4

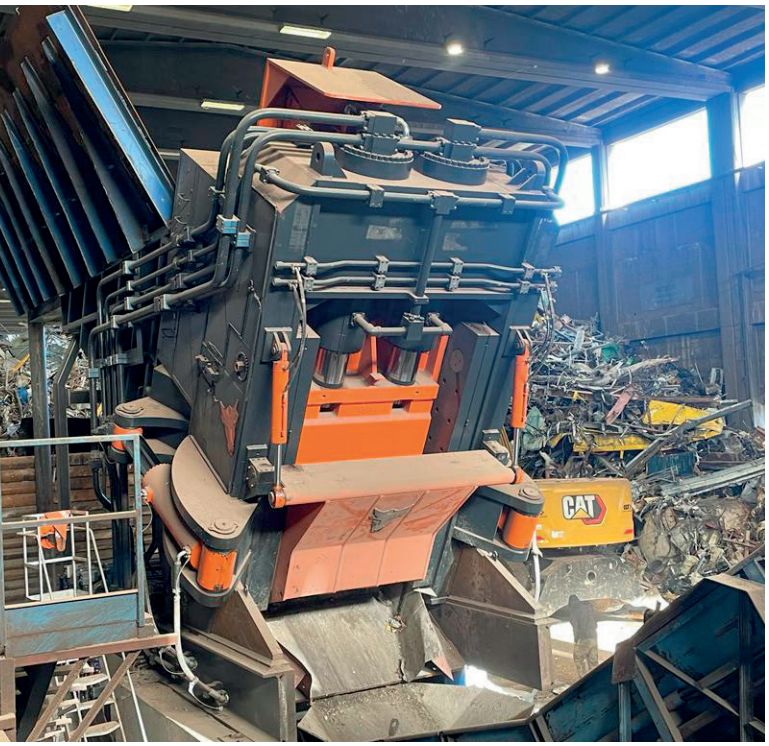
SHEAR BALER *TRANSPORTABLE* "ELLE"

LOADING - UNLOADING

The transportable "ELLE" shear balers (loading-unloading) are suitable for users who need to move frequently or use them for renting to third parties. They work both resting on the ground and on the means of transport, they are quick and simple to position and put into operation.
The shear baler can shear the scrap and produce bales which are automatically ejected.
The compression system features swinging lids with over stroke on both lids (SBxc) and is defined by a base for sliding the scrap, while the two swinging lids are hinged longitudinally to the base.
The "ELLE" transportable shear balers are equipped with 4 lifting cylinders to allow loading and unloading from the means of transport. The maximum lifting height is 1,100 mm. The supporting structure is equipped with 2 additional rear cylinders to ensure stability and alignment.

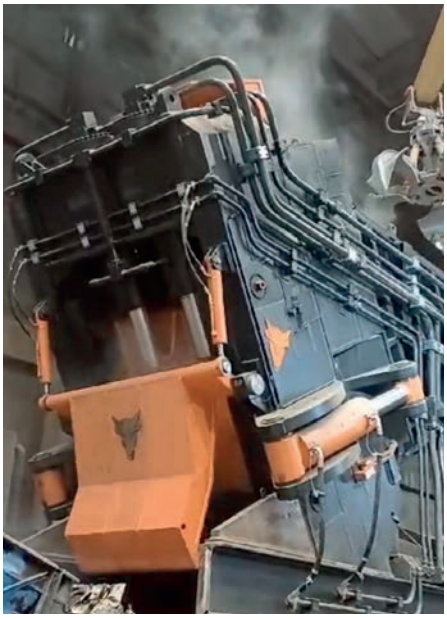
SHEAR BALER "ELLE"		ELLE7	ELLE8	ELLE10
Shear cylinders	n.	2	2	2
Cutting force	t	750	850	950
Clamp		-	-	-
SB: swinging wings compression system		SBxc	SBxc	SBxc
Over stroke on both wings with 90° stop		-	-	-
Open box dimension	mm	2500x6100	2500x7200	2500x7200
Bale dimension	mm	900x600	900x600	900x600
Cylinders for each wing	n.	2	3	3
Main compression cylinder	t	150	150	150
Diesel engine (on demand)	hp	280	400	400
Lifting jacks	n.	4	4	4

CONTINUOUS FEEDING SHEAR "TR"



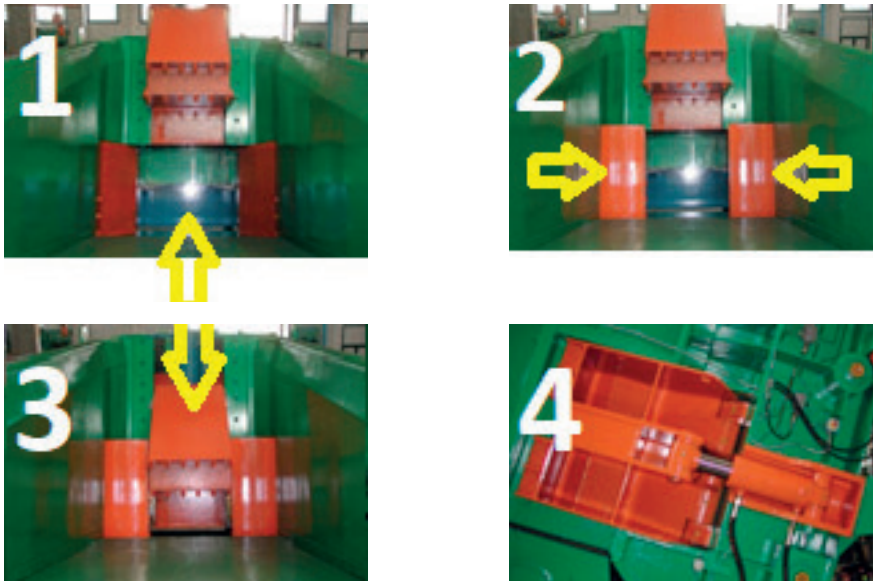
TAURUS
Blackline

The BLACKLINE line up of continuous feeding shears, which includes the TR, has seen revisions and new updates. The range has been expanded with the introduction of TR-VHD (very heavy duty) shears with cutting forces up to 1800 tons, suitable for continuous shearing of all types of scrap, from profiles, pipes, and pantograph sheets, to mixed and bulky scrap, demolition, rails, and rebar.



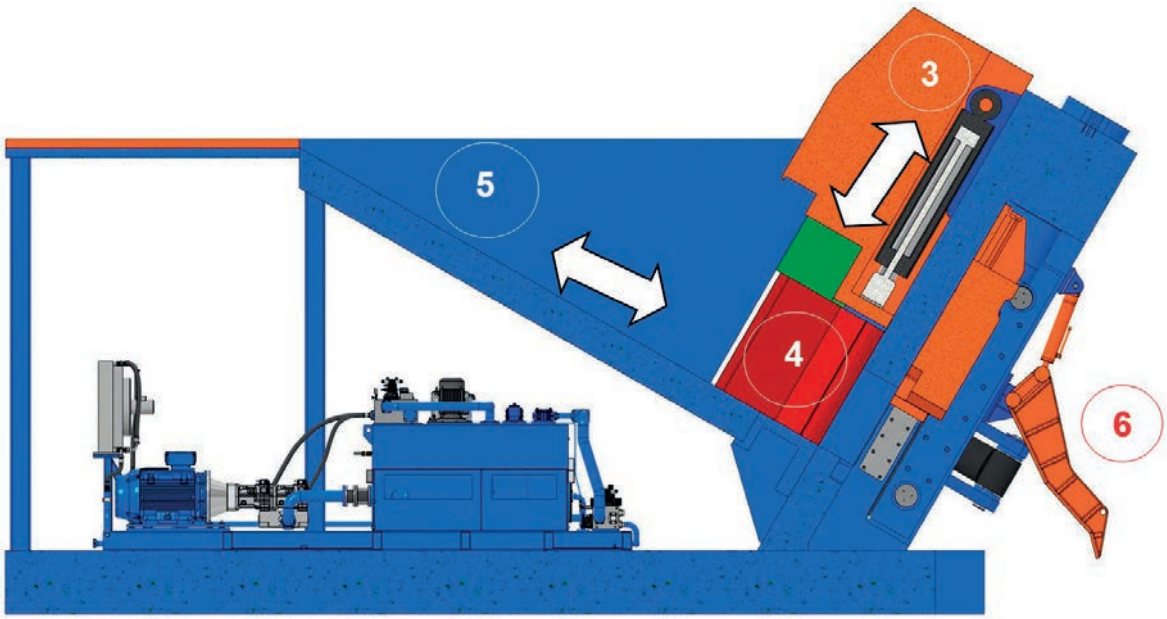
- Automatic and continuous cutting cycle.
- Open box
- Oscillating table inclined by 30°
- Cutting width up to 1400 mm
- Cutting force from 800 to 1800 t.
- Lateral compression up to 500 t.
- Vertical compression force up to 500 t.
- No foundation required.
- Installed power up to 950 kw.
- Output up to 100 t/h.

THE FUNCTIONING



Scrap shears with inclined continuous feeding system TR are equipped with a vertical clamp (3) and two oscillating side lids (4).
The scrap to be sheared is loaded into the feeding box, which is attached at the front of the shear structure and consists of a hopper closed at the sides, with an open top and an inclined, oscillating table (1) (5).
After the side “lids” (4) and the vertical clamp (3) have reduced the size of the scrap, the gravity and the “push” of the inclined/ oscillating table (5) let it slide under the shear blades.

The cutting length is defined by the external positive stop (6). Designed in this way, the machine pre-compresses and cuts the scrap in a continuous manner, without the need for manual material reduction prior to the shearing phase.
The operator’s work is therefore limited to loading the feeding box.
TR’ shears have a small footprint, concentrate their weight on the elements subject to stress and wear. They can also be loaded from both sides and are operated by a single operator.



TAURUS
Redline

The recovery of raw material contained in post-consumer durable goods, consisting of complex sets of ferrous and nonferrous metals and other materials such as plastics, glass, rubber, textiles, etc., is a relatively recent aspect of recycling that emerged when durable goods, introduced on a large scale in the 1960s with the economic miracle, began to be ejected in large quantities at the end of their useful life. By the economic and environmental importance of the secondary raw material (MPS) there is a need to learn more about these sets of metals and nonmetals, for a more efficient recovery action that influences the directs post-collection processing.

The scrap recycling supply chain must align itself with a future-oriented economy that has as its goal the product thought of as scrap and the scrap thought of as product (sustainable development > green economy > circular economy). Recycling is also an activity that must be able to combine respect for the environment with economically sustainable solutions.

THE MODULAR HAMMER MILL

The "REDMILL" module, a horizontal axis hammer mill with side loading system, has been designed and built to enhance, through grinding and selection, the "poor" scrap from E.L.V, light scrap, WEEE, large home appliances …
The justified demand for reclaimed scrap from the presence of pollutants makes necessary to have a grinding and selection system which, in terms of size, operating space, personnel employed, installed power, production and management costs, fits easily into the scrap yard and guarantees supply of high quality raw materials.

"REDMILL", machines that adapt to the times, equipped with a sturdy support frame.

HAMMER MILL "REDMILL"		X66	X67	X77
Rotor external diameter	mm	1500	1500	1650
Rotor lenght	mm	1700	2000	2000
Rotor weight	Kg	14000	16500	20000
Hammer weight	Kg	70	70	80
Electric motor	up to Kw	560	560	710
Output	t/h	<30	<35	<40

A NEW GENERATION OF REFINER

The "REDFINER" module enhances, through comminution and selection, the "poor" scrap coming from separate collection, WEEE, small appliances, valves, casings, internal combustion engines from end-of-life vehicles, cans, spray cans, electric motors, transformers , stators, window frames, packaging scraps, meatballs...
The "REDFINER" was designed and built with the aim of putting the material to be recycled in the best conditions to be separated and released.
The solution to limit the waste of natural resources is to recycle more and better.
Recycling more means recovering the greatest possible number of resources from "post-consumer scrap", expanding the amount of recycled and recyclables.
Better recycling means collecting, dividing and separating better. It means working on the performance of treatment plants to obtain products that are ever closer to the raw material and from which high quality raw materials can be obtained.
With in-depth studies and research performed by Sander, Schubert and Kirchner of the Freiberg Technical University, they have developed a theory to define how best to separate and recover the metal components from the whole scrap coming from the waste of the crushing plants, from the collection scrap and in particular from the scrap of consumption.
The "REDFINER" is the result of the application and development of these studies.

The “REDFINER” is equipped with the most advanced technologies, designed to effectively and efficiently refine and separate a vast variety of scrap metal and production waste.
The internal geometries of the box, the grids and the hammers have been suitably studied and designed, optimising the parameters that influence the crushing phases, to obtain a strong comminution such as to allow not only the breaking of the connection joints but also the release of the components, for complete separation downstream of the refiner.
A new, innovative and profitable way of recovering raw materials from “waste”
A machine that fits easily into the reality of a scrap yard and guarantees a supply of high quality raw materials.
The refined metal is separated, cleaned, compacted, uniform and with high density.

REFINER “REDFINER”		D45	D46	D56
Rotor external diameter	mm	1200	1200	1300
Rotor length	mm	1400	1600	1600
Rotor weight	Kg	7500	9000	10500
Hammer weight	Kg	50	50	55
Electric motor	up to Kw	355	355	450
Output	t/h	<16	<20	<25

THE BEST FRIEND OF YOUR HAMMER MILL

The BRAVO 'redripper', with horizontally counter-rotating shafts, is used upstream of hammer mills in scrap mills, to coarsely and homogeneously crush mixed scrap, bulky scrap and E.L.V.
It is in particular used to rip bales of E.L.V., light and collected scrap, to facilitate feeding and make uniform the subsequent ripping operation at the mill.
BRAVO: is equipped with an original OVERSTROKE 'OSD' swinging inclined base (patented), which increases productivity, facilitates the gripping of particularly bulky materials and avoids floating scrap at the entrance to the ripping zone.

BRAVO is an indispensable technology in shredding and sorting plants for ferrous and non-ferrous scrap metal because:

- Eliminates the cause of explosions in the shredding chamber;
- Reduces and optimises the energy consumption of the grinding process;
- Avoids absorption peaks by letting the mill 'digest' pre-crushed and homogenously sized material;
- Significantly increases the service life of wear plates, grids and hammers;
- Enables smaller mills to process more material efficiently with an even flow of scrap, by pre-shredding E.L.V. as they are or in bales.

REDRIPPER "BRAVO"		B12	B15	B16	B.MAX
Rotor external diameter	mm	1200	1350	1600	1800
Counter rotating shaft	n.	2	2	2	2
Low speed rotor	r/1'	2	3	3	4
High speed rotor	r/1'	8	12	12	16
Main motors	Kw	510	760	950	1000
FLAP motor	Kw	55	55	55	55
Output	t/h	<40	<80	<100	<120
Maximum bale density	t/m³	0,8	0,8	0,8	0,8
Total weight	t	60	90	100	120

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