



ARNOLD Technology
RECYCLINGSYSTEMS



◀ **BRIQUETTING**

◀ **BALING**

◀ **BREAKING**

◀ **CUTTING**

◀ **SHREDDING**

◀ **SORTING**

HIGH PERFORMANCE - METAL RECYCLING

Metal Recycling is not just Metal Recycling

It is a well-known fact: metal recycling is not just metal recycling. It is, above all, about enhancing the value of one's metal residues through optimal metal recycling and the use of the optimum metal recycling technology.

We are experts in this field. Like no other company we have specialised in optimal

metal recycling technologies, based on the so-called Arnold-technology, which is well-proven worldwide. More than 80 years of experience in the field of metal processing and with more than 1,000 machines and equipment installed by our company – these facts speak for themselves.

Our solutions are specifically tailored to the particular requirements and tasks of waste management companies, recycling companies or companies in the metal working industry.



BRIQUETTING

BALING

BREAKING

CUTTING

SHREDDING

SORTING



ONE COMPANY, ONE TEAM, ONE FOCUS: HIGH PERFORMANCE – METAL RECYCLING

Founding of the Arnold company by Franz Arnold in
Vienna Ottakring

1st Baling Press (Type SP 100)

1st Briquetting Press (Type HSB 10 AV)

1st Scrap Shear (Type HS 600)

Takeover by ATM Maschinenbau GmbH & Co. KG

New production site and company
headquarters in Fohnsdorf

ArnoPress K 600

ArnoShred 2100

Innovations go on. ArnoCut 1300



1926



1953



1964



1970



2002



2007



2011



2012

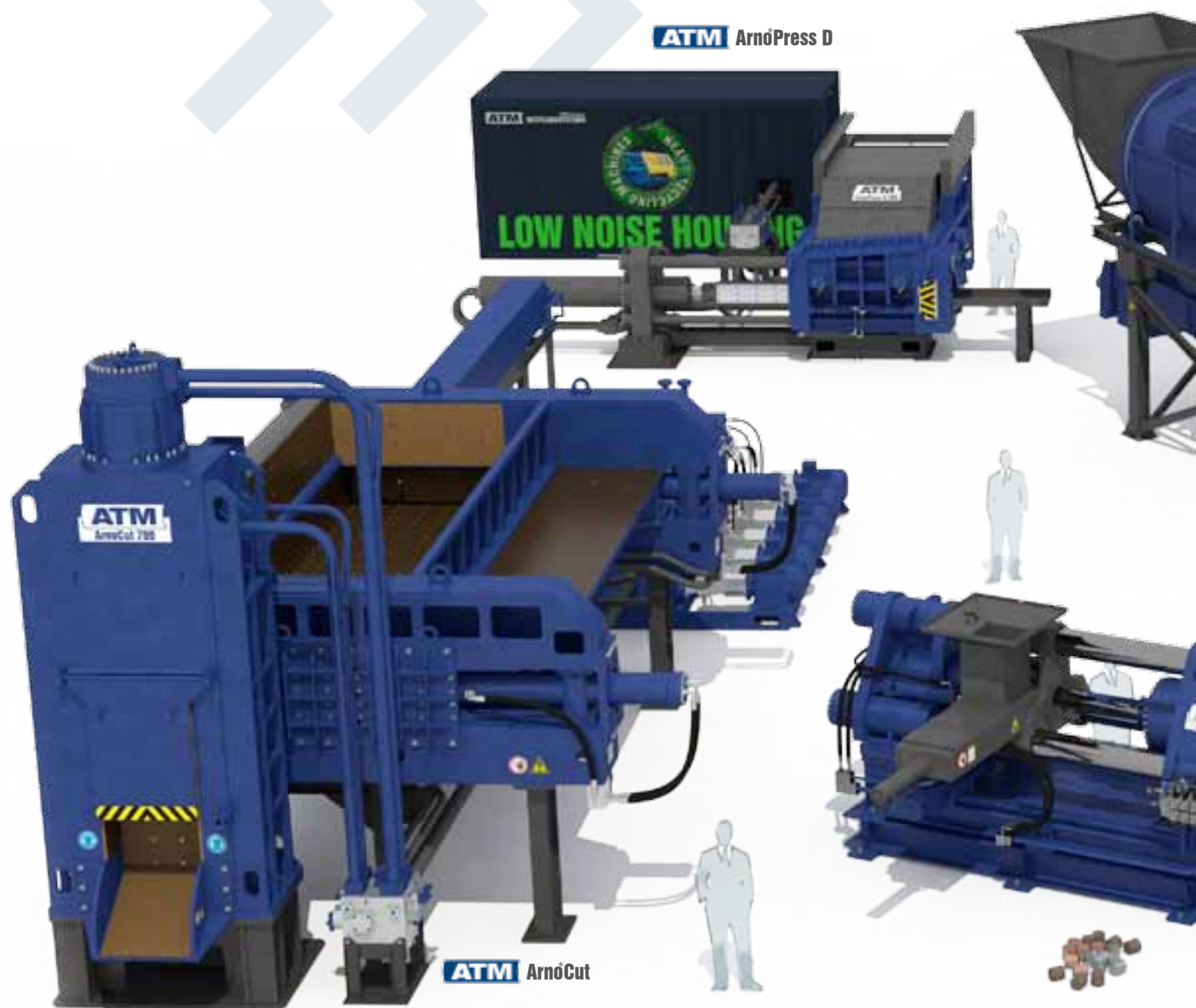


2013

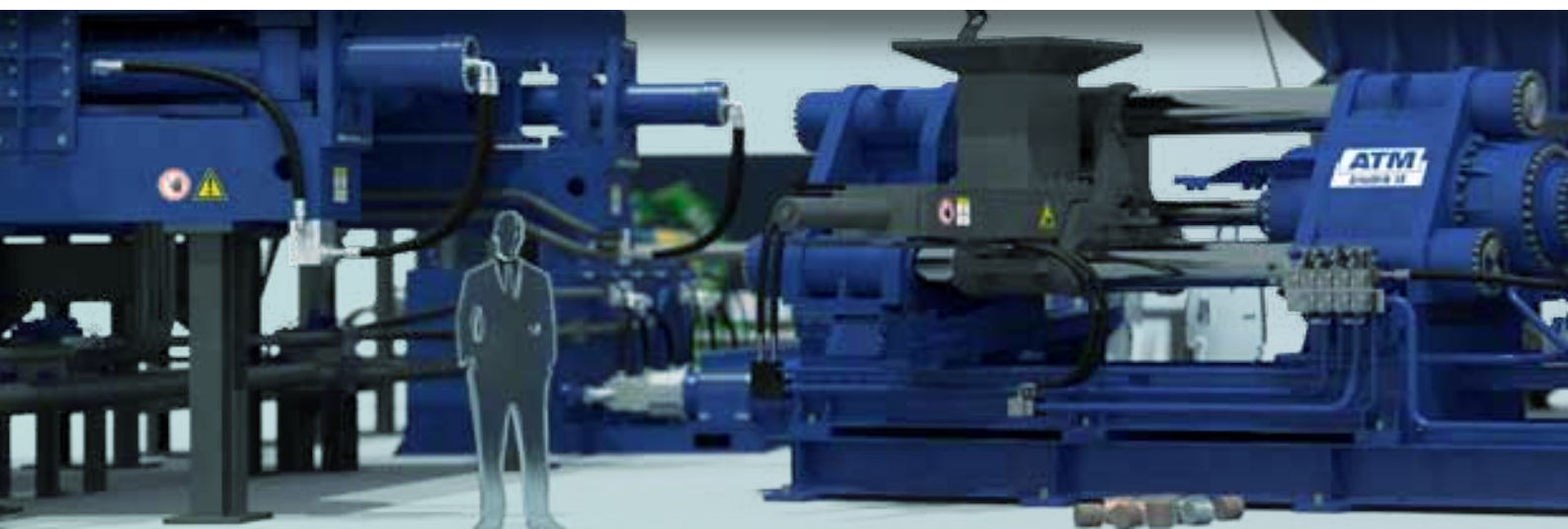


> Our Products

ATM ArnóPress D



ATM ArnóCut





ARNOLD Technology
RECYCLINGSYSTEMS



ATM ArnóSort



ATM ArnóBreak C



ATM ArnóPress K



ATM ArnóBrik

ATM ArnóShred





► Briquetting Press

The ArnoBrik Series Briquetting Presses are offered with three different filling variants, according to the free flowing pro-perty of the material. An inclined feeder or a two-step feeder permit these presses to process both grinding slurry and drilling swarf.

The solid welded construction design with two or three columns means that the machines can also be used for heavy continuous operation. Each machine can be operated manually or automatically.

All presses have a graphic operator panel with visualisation of all process sequences and can therefore be integrated easily into fully automated production lines. Remote maintenance and system adjustments can, of course, also be carried out.

Transport and storage savings

In contrast to loose swarf, briquettes offer huge cost savings. Because briquettes emit virtually no fluids, simpler and smaller deposit sites can be used.

Raw material recycling

The compressed briquettes can be smelted more easily and safely than loose swarf.

Compressible materials

Steel, cast iron, stainless steel, aluminium, magnesium, brass, copper, titanium, special alloys in powder form, slag compounds, battery waste and grinding slurry from a wide variety of materials, as well as tyre wires and mill scales. Also the mixed briquette-forming of diverse materials.

ATM ArnoBrik®

Auxiliary equipment

Depending on arrangement and use, bunker systems and screw conveyors, dosing systems or weighing systems can also be supplied.





technical data

| | | 2 Columns | | | 3 Columns | | | |
|------------------------------------|--------------------|-----------|---------|---------|-----------|---------|---------|---------|
| | Arno® Brik | 5 | 7 | 10 | 12 | 15 | 18 | 22 |
| Briquette diameter | mm | 50 | 70 | 105 | 125 | 140 | 180 | 210 |
| | [in] | [2] | [3] | [4] | [5] | [6] | [7] | [9] |
| Briquette diameter max. | mm | 70 | 90 | 120 | 135 | 150 | 195 | 250 |
| | [in] | [2.8] | [3.5] | [4.7] | [5.3] | [5.9] | [7.7] | [9.3] |
| Power Main cylinder | kN | 760 | 1,400 | 2,900 | 4,000 | 5,200 | 8,500 | 12,500 |
| Briquette density steel, cast iron | kg/dm ³ | <5.5 | <5.5 | <5.5 | <5.5 | <5.5 | <5.5 | <5.5 |
| Briquette density aluminium | kg/dm ³ | <2.4 | <2.4 | <2.4 | <2.4 | <2.4 | <2.4 | <2.4 |
| Briquette density brass, copper | kg/dm ³ | <7.0 | <7.0 | <7.0 | <7.0 | <7.0 | <7.0 | <7.0 |
| Capacity* steel, cast iron | t/h | <0.3 | <0.5 | <1.5 | <2.5 | <4.5 | <7.5 | <12.0 |
| Capacity* aluminium | t/h | <0.15 | <0.25 | <0.6 | <1.1 | <2.2 | <3.5 | <5.0 |
| Capacity* brass, copper | t/h | <0.4 | <0.6 | <2.0 | <3.0 | <6.0 | <8.0 | <14.0 |
| Cycle time standard performance | s | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Driving power standard | kW | 15 | 22 | 60 | 90 | 120 | 180 | 240 |
| Driving power increased | kW | - | 30 | - | - | - | - | - |
| Footprint | m x m | 3.0x2.0 | 3.5x1.8 | 4.3x3.6 | 4.5x5.0 | 5.0x8.0 | 6.5x8.5 | 7.0x9.0 |
| | [ft] | [10x7] | [12x6] | [14x12] | [15x16] | [16x26] | [21x28] | [23x30] |

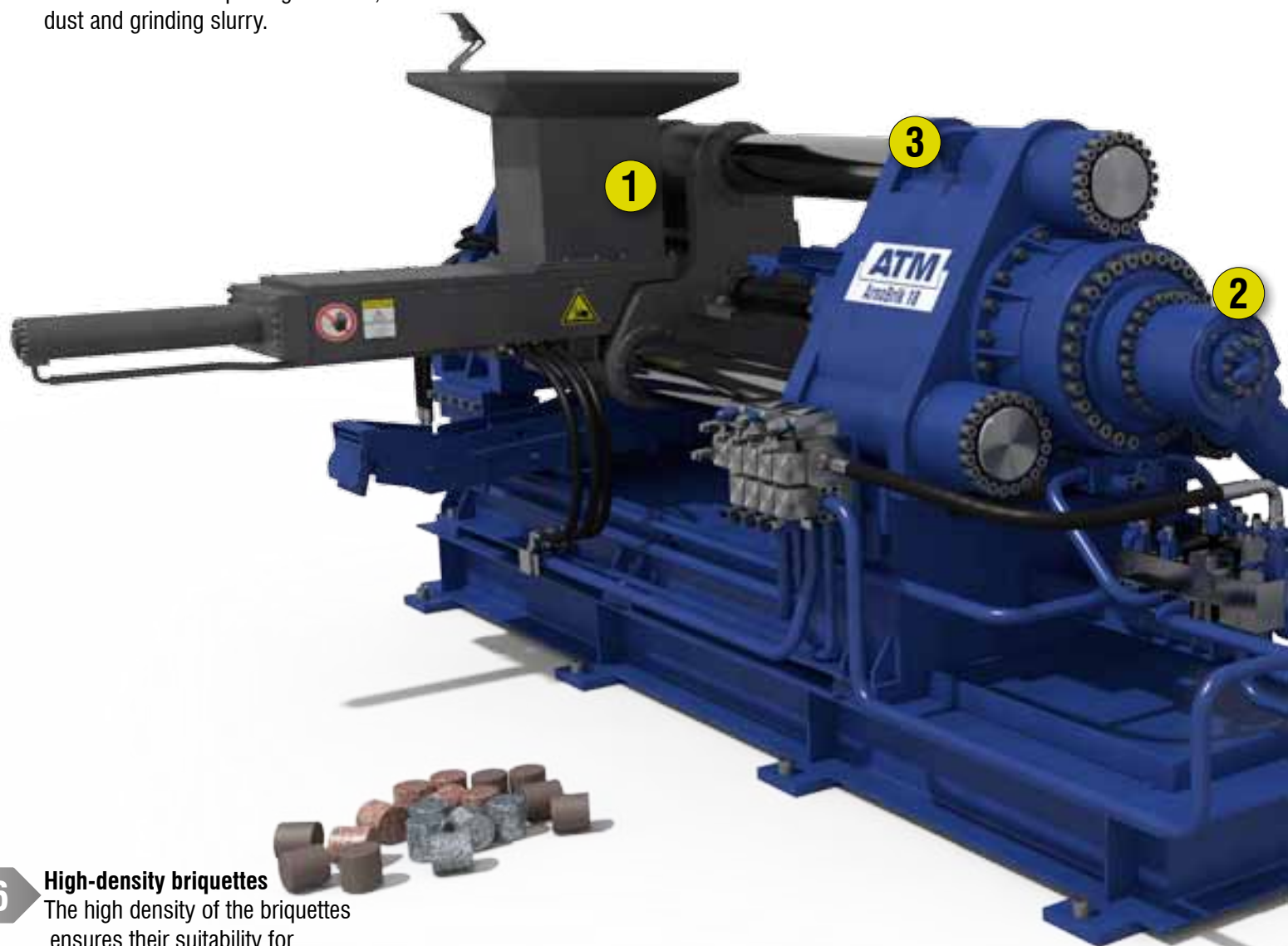
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➤ Briquetting Press **ATM** ArnoBrik



ArnoBrik for the briquetting of swarf, dust and grinding slurry.



6

High-density briquettes

The high density of the briquettes ensures their suitability for transport and guarantees best melting results.



Moving tool carriage

1

The optimum system to balance the relative motion during the compression stage guaranteeing an enormous wear reduction in the pressing box.

Filling valve at the pressing cylinder

2

ATM presses are pioneers on the market and set the trend. More than 30% of the drive energy can be saved by the use of the filling valve technology.

3-columns technology

3

No other construction principle diverts pressing forces as effectively as the 3-columns technology. Columns fitted with patented clamping nuts process millions of compacting cycles at full load.

Hydraulic tank

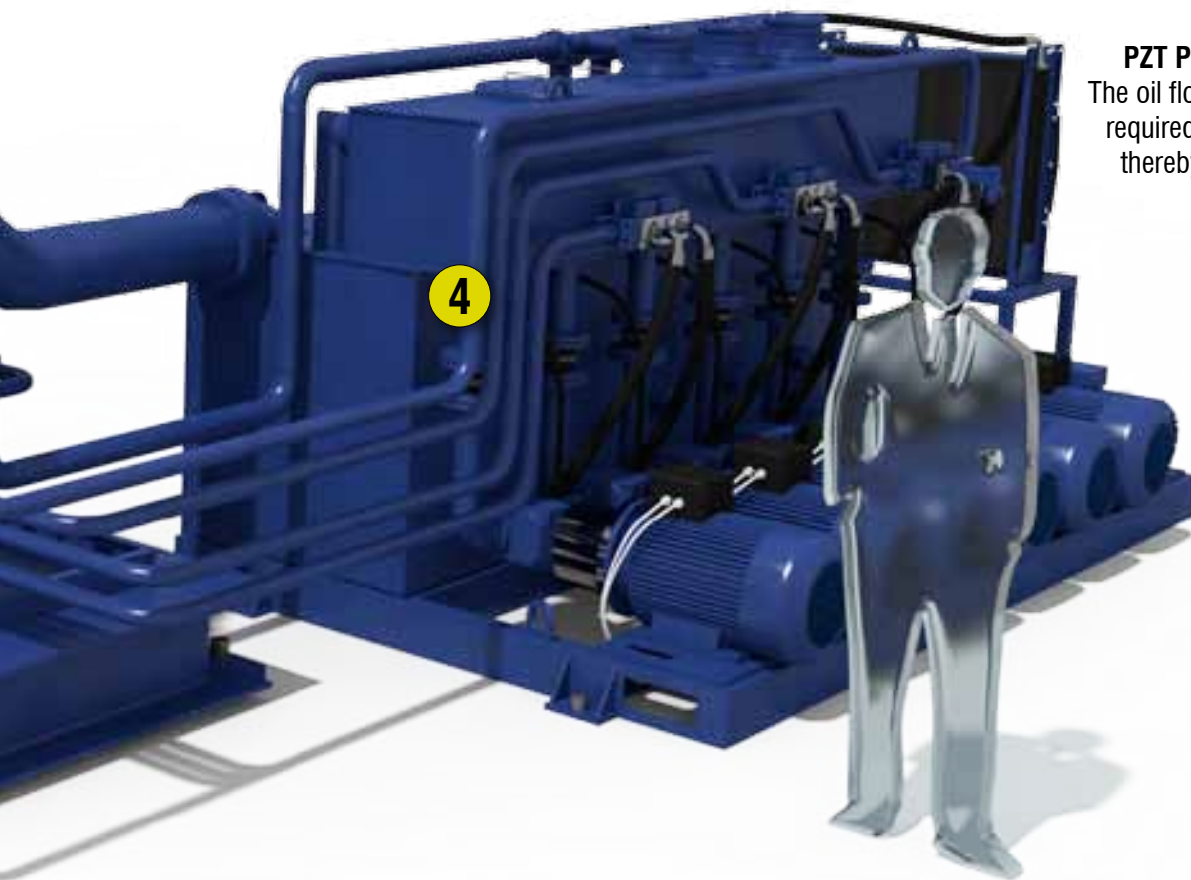
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The bicameral system guarantees the supply of filtered and cooled oil to the performance-controlled hydraulic pumps.

PZT Pump activation technology

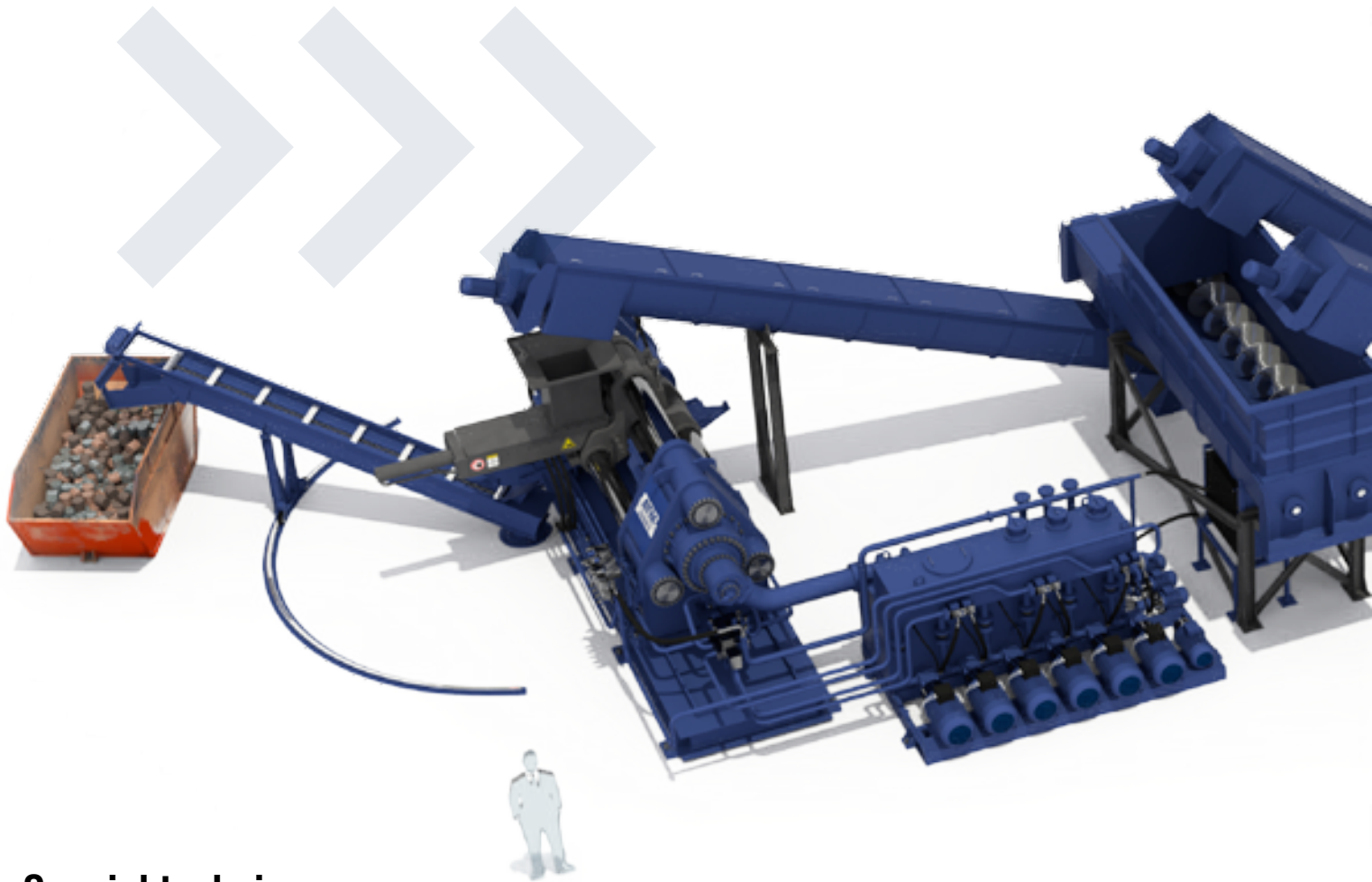
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The oil flow technology regulates the required quantity of oil per cylinder, thereby minimising the necessary drive energy of the press.



Recycling system of swarf processing

From secondary raw materials to reusable briquettes.



Special techniques

Grinding slurry briquetting

The most profitable aspect of briquette forming can be found during the briquetting process where more than 90% of the oil and water components are pressed out. The extruded lubricants and cutting oils can be reused. Due to the drop in expenses (no landfill charges and disposal costs) the investment in an ATM briquetting press is recovered within just a few months.

Risk material magnesium or titanium shavings

Stored titanium and magnesium swarf are highly inflammable. Their importance as lightweight construction material in the automotive industry is continuously increasing. Due to fire hazard particular caution must be exercised when handling these materials. These risks are minimised, however, by the use of an ATM briquetting press.

Aluminium dross

During the production and refinement of aluminium the so-called dross is formed on the melt. This dross not only contains aluminium and aluminium oxide but also various combustion products and dissolved residues of the refractory lining. Parts of the dross can be reused and are processed and then pressed with special ATM die materials.





Special alloys

The press agglomeration of special alloys is gaining in importance and has proved successful through the use of the small machine series ArnoBrik 5 and 7 ensuring a high level of applied compressive force and a flexible process management.

Melting behaviour aluminium

In cooperation with the University of Leoben investigations on the combustion behaviour of swarf and briquettes during the melting process of secondary raw materials were carried out. These experiments resulted in a higher output from the aluminium briquettes and, therefore, a higher efficiency in recycling.

Your requirements

As a provider of system solutions in the field of metal recycling ATM offers specifically tailored solutions to your particular requirements. We will also gladly carry out tests based on your specific needs.





➤ Scrap Shear

The ArnoCut Series Scrap Shear is produced in five sizes from 4,000 to 13,000 kN shear force.

All compacting chamber wear plates are made of Hardox 450 up to Hardox 600 and guarantee the highest quality and a long useful life.

Cutting cycles are optimised by path measurement systems in the cylinders. The need to use an elaborate foundation is avoided thanks to the monobloc construction. A centralized lubrication system, various clogging indicators and fault analysis guarantee simple maintenance. Comfortable operation with two joysticks and a multifunctional display in a soundproofed, air-conditioned cab, make the scrap shear a workplace with the highest level of productivity.

Applications

The scrap shear is one of the most important pieces of equipment within the recycling industry. It represents the standard level of equipment in scrap yards. Equipment capacity is usually crucial in environments of this type, since a large proportion of the scrap is processed using shears.

Functional criteria

Scrap shears must be able to process the most varied types of scrap economically. This is true for cutting heavy or cupola scrap or when reducing the size of vehicle body parts. Due only to our many years of experience it is possible to achieve the optimum combination of our variably deliverable side compactors with suppression force and shear force.

ATM ArnoCut®

Processible materials

Depending on shear size, steel constructions, tanks or car bodies can be cut. In addition, the rail breaking equipment allows the processing of railway rails without damage to the knives, as the rails are notched and broken.

Auxiliary equipment

Hydraulic knife tension, remote control and a fully air-conditioned cab make daily work easier. A rail breaking function, a loading rig and appropriate conveying plants can be offered as options with the shear.





multi functionality

high performance baling function

technical data

| | Arno[®] Cut | 400 | 600 | 700 | 850 | 1000 | 1300 |
|-------------------------|-----------------------------|------------|------------|------------|------------|-------------|-------------|
| Shear force | kN | 4,000 | 6,000 | 7,000 | 8,500 | 10,000 | 13,500 |
| Down holder force | kN | 1,850 | 1,850 | 1,850 | 2,500 | 3,050 | 3,200 |
| Lid force | kN | 2,000 | 2,000 | 2,000 | 2,000 | 2,800 | 2,800 |
| Side-stamp force | kN | 2,500 | 2,500 | 2,800 | 2,800 | 3,600 | 3,600 |
| Feeding force | kN | 1,500 | 1,500 | 1,000 | 1,000 | 1,200 | 1,200 |
| Cutting width | mm | 420 | 640 | <800 | <1,000 | <1,000 | <1,200 |
| | [in] | [17] | [25] | [30] | [40] | [40] | [40] |
| Filling bed height | mm | 520 | 600 | 600 | 700 | 800 | 1,000 |
| | [in] | [20.5] | [23.5] | [23.5] | [27.6] | [31.5] | [33.5] |
| Filling length | m | 4,1 | 6,5 | 6 | <7 | <8 | <10 |
| | [in] | [161.4] | [255.9] | [236.2] | [<236.2] | [<275.6] | [<354.3] |
| Capacity*: | t/h | <10 | <15 | <20 | <30 | <40 | <50 |
| Number of cuts | per min | <5 | <6 | <6 | <6 | <6 | <6 |
| Driving power standard | kW | 110 | 180 | 180 | 330 | 360 | 450 |
| Driving power increased | kW | 165 | 220 | 270 | 360 | 440 | 550 |
| Footprint | m x m | 6x15 | 6x18 | 7x18 | 7x20 | 7x22 | 9x24 |
| | [ft] | [20x49] | [20x59] | [23x59] | [23x66] | [23x72] | [30x79] |
| Bale size | mm | 400 | 600 | | | | |
| | [in] | [15.8] | [23.6] | | | | |
| Baling force total | kN | 6,000 | 6,000 | | | | |

*depends on material





Scrap Shear

ATM ArnoCut



ArnoCut for the cutting and pressing of light as well as heavy scrap.



1



1



4

5

Wear plates

1

Depending on the purpose of the shear we offer straight wear plates as well as wear plates with special square or trapezoid-shaped profiles in various material qualities.

Ergonomic workplace

2

An operator seat with 2 joysticks, monitor visualisation and video surveillance situated in an air-conditioned cabin set new standards in workplace design.

Traversing lateral compressor

3

Two separately controllable side cylinders make it possible to traverse the side stamp up to 15° in order to pre-compress bulky constructions and materials.

Hydraulic tank

4

The bicameral system guarantees the supply of filtered and cooled oil to the performance-controlled hydraulic pumps.

3

4

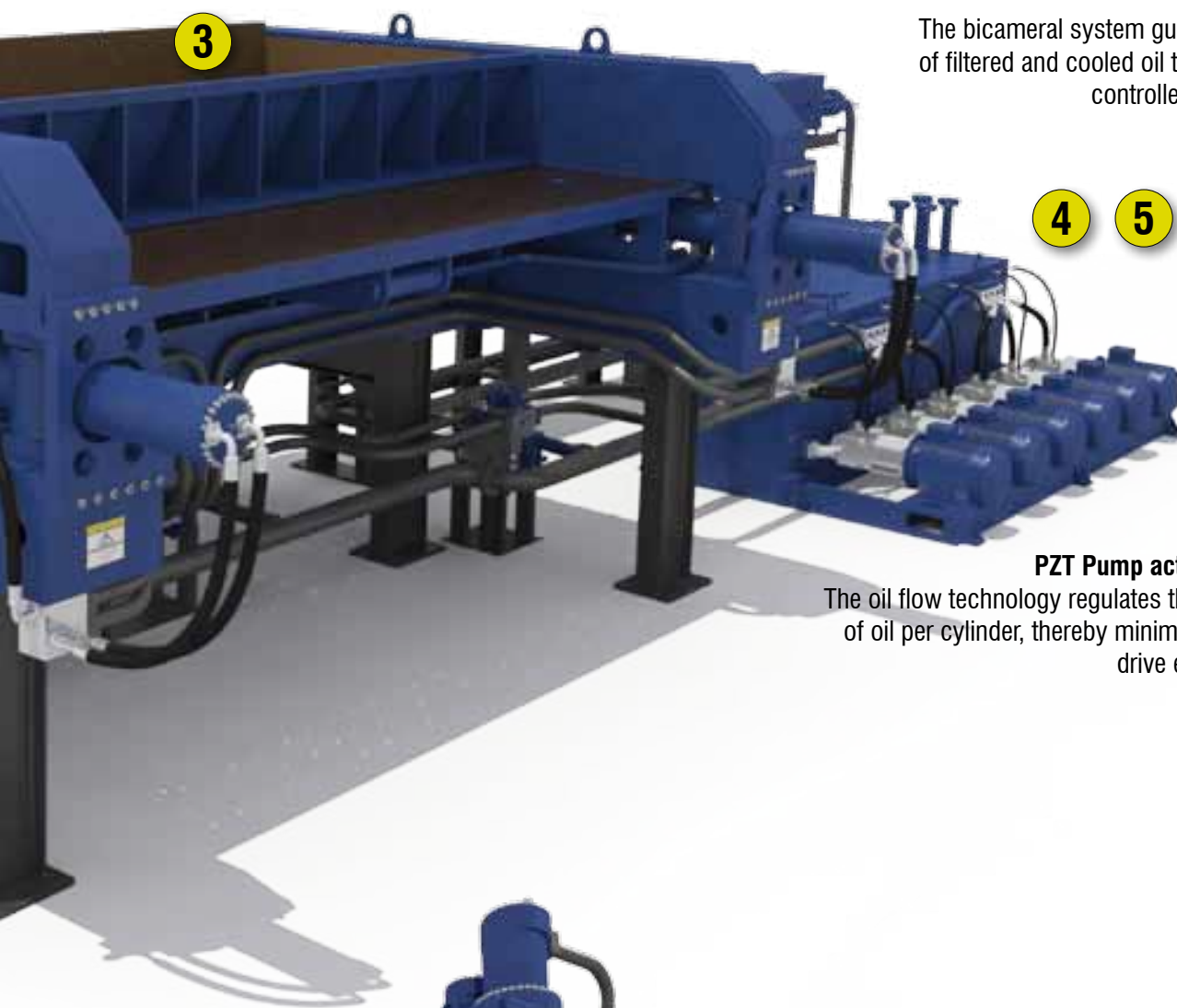
5



PZT Pump activation technology

5

The oil flow technology regulates the required quantity of oil per cylinder, thereby minimising the necessary drive energy of the press.





➤ Baling Press

The ArnoPress K Series Baling Presses are available with 2 or 3 compactor steps. There are a total of five sizes in the programme. Models 100-2 to 600-2 compact in two steps, while models 100-3 to 350-3 compact the material three-dimensionally.

All parts coming into contact with the scrap are lined with high-strength wear plates with a special wave-shaped profile. The solid welded construction design means that the machines can also be used for heavy continuous operation. The visualisation of all process sequences means that the systems can be integrated into fully automated production lines and can be maintained via a modem.

The main field of use for this press series is the automotive industry and industrial press lines with high waste accumulation.

Transport and storage savings

Up to 30% of expenditure can be saved on the handling and transport of bales.

Applications

The 3-ram presses are mainly used in pressing and stamping operations in the automotive and non-ferrous metal industries, in which large quantities of press waste are pressed into highly compact, easily transportable bales with side lengths of 300 or 400 mm.

Raw material recovery

Unlike loose sheets, compressed bales are easier to load and smelt. The ex-works produced bales are also free from contamination, meaning that the attainable price is significantly higher.

ATM ArnoPress® K

Compressible materials

Steel, stainless steel, aluminium, brass, copper, lead and, in particular, auto-body sheet metal from the automotive industry.

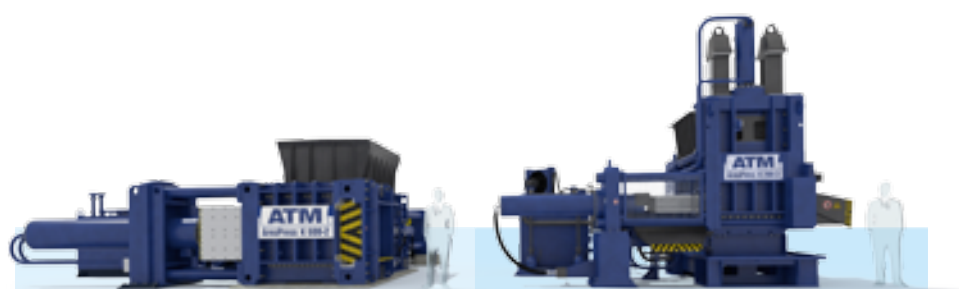
Auxiliary equipment

Various conveying plants such as scrape conveyors and strap hinge conveyors as well as skip weighers and bale loading systems.





technical data



2 Rams

3 Rams

| | Arno® Press K | 100-2 | 150-2 | 600-2 | 100-3 | 200-3 | 350-3 |
|-------------------------|----------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Standard bale size | mm | 300x300 | 400x400 | 1000x1000 | 300x300 | 300x300 | 400x400 |
| | [in] | [12 x 12] | [16 x 16] | [40 x 40] | [12 x 12] | [12 x 12] | [16 x 16] |
| Optional bale size | mm | 400x400 | - | - | 400x400 | 400x400 | 300x300 |
| | [in] | [16 x 16] | - | - | [16 x 16] | [16 x 16] | [12 x 12] |
| Power main cylinder | kN | 1,000 | 1,500 | 6,000 | 1,000 | 2,000 | 3,500 |
| Bale density steel | kg/dm ³ | <3.0 | <3.0 | <1.5 | <3.0 | <3.5 | <3.5 |
| Bale density aluminium | kg/dm ³ | <1.2 | <1.2 | <1.0 | <1.2 | <1.2 | <1.5 |
| Bale density copper | kg/dm ³ | <3.5 | <3.5 | <1.5 | <3.5 | <4.0 | <4.0 |
| Capacity* steel | t/h | <5.0 | <10.0 | <60 | <7.0 | <14.0 | <30.0 |
| Capacity* aluminium | t/h | <2.5 | <6.0 | <40 | <4.5 | <7.0 | <12.0 |
| Capacity* copper | t/h | <7.5 | <17.0 | <60 | <8.5 | <16.0 | <35.0 |
| Cycle time | s | 45 | 45 | 100 | 40 | 25 | 29 |
| Driving power standard | kW | 37 | 74 | 180 | 45 | 110 | 180 |
| Driving power increased | kW | 45 | 90 | 220 | 60 | 150 | 220 |
| Footprint | m x m | 6.0x3.8 | 7.0x5.0 | 10.7x8.1 | 4.0x3.8 | 5.5x7.0 | 8.2x7.6 |
| | [ft] | [20 x 13] | [23 x 16] | [35 x 27] | [13 x 13] | [18 x 23] | [27 x 25] |

*depends on material



> Baling Press **ATM** ArnoPress K



ArnoPress K for the grouting of stamping waste resulting from series production.





Wear plates

1

Depending on the purpose of the press we offer wear plates with square-, trapezoid- and wave-shaped profiles in various material qualities.

Bale carriage

2

A patented bale carriage allows for the buffering or the continuous transportation of bales via the subsequent conveyance system.

Feedstock metering

3

Through weighing and pre dosing via charging hoppers the productive capacity of the press is optimised.

Hydraulic tank

4

The bicameral system guarantees the supply of filtered and cooled oil to the performance-controlled hydraulic pumps.

PZT Pump activation technology

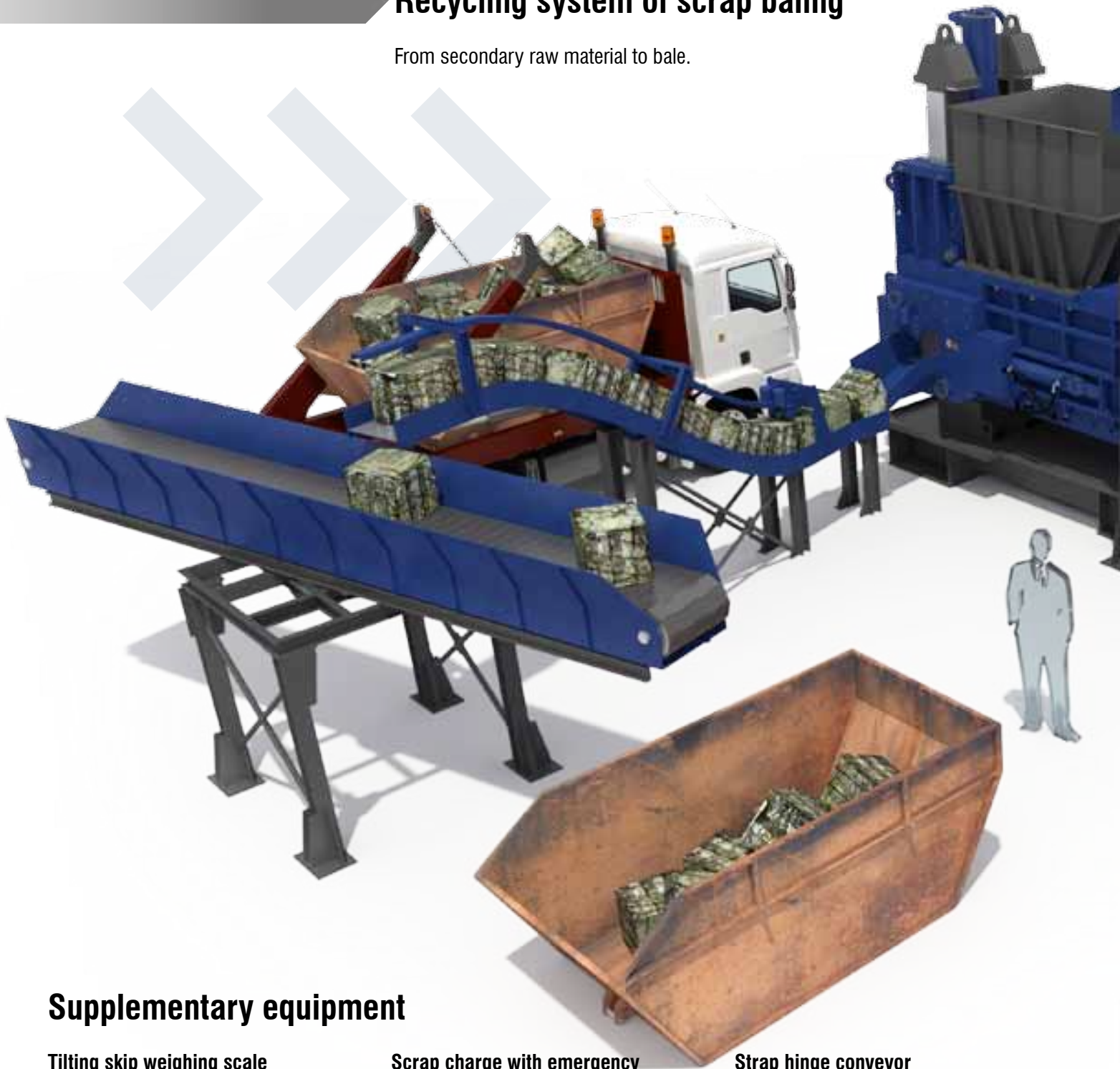
5

The pump activation technology regulates the required quantity of oil per cylinder, thereby minimising the necessary drive energy of the press.



Recycling system of scrap baling

From secondary raw material to bale.



Supplementary equipment

Tilting skip weighing scale

To guarantee a controlled filling of the baling chamber a tilting skip weighing scale is employed to weigh the scrap.

Scrap charge with emergency discharge

Charging the scrap onto the press is carried out via conveyors. In case of service works on the press the scrap can be guided through an emergency discharge shaft.

Strap hinge conveyor

For equipment employed in shift operation highly robust hinge plate conveyors are used. Special attention is paid to a soft and targeted bale transfer at the various transfer points.





Bale carriage

To guarantee a soft transfer of bales the bale carriages specifically designed for this purpose by ATM can be deployed.

Manipulator

For further transport to the user, the bales can be loaded into various containers or railroad freight cars either with bale carriages or with a manipulator.

Your requirements

As a provider of system solutions in the field of metal recycling ATM offers specifically tailored solutions to your particular requirements. We will also gladly carry out tests based on your specific needs.





➤ Baling Press

The ArnoPress D Series Baling Press can be supplied in five sizes. Models 80-2 and 100-2 compact on two levels, and models 100-3 to 300-3 compact the material three-dimensionally. The first compression is carried out using a cutting head, which allows bulky parts to be reduced in size as well as achieving pre-compaction. All parts coming into contact with the scrap are lined with high-strength wear plates with a special trapeze-shaped profile. Each machine can be controlled manually or automatically.

Functional criteria

Because transport capacities to and from the scrap yard are a critical price factor, the rapid processing of bulky, light and medium scrap is particularly advantageous. The cuboid shape of the packages means that transport and storage capacity can be optimally used.

Raw material recycling

Unlike loose sheets, compressed bales are easier to load and smelt. Another advantage of these presses is that even small quantities of entirely different materials such as copper guttering, aluminium wire or various sheet metal wastes can be quickly and separately compressed.

ATM ArnoPress® D

Applications

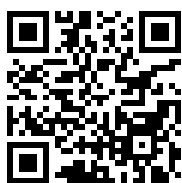
The ArnoPress D Series Presses are primarily used at scrap yards and in non-ferrous metal operations in which large, bulky parts are compressed. The APD 220 Car Flattener is a special form of the ArnoPress D Press. Car bodies that have been pressed flat can be shredded more easily.

Compressible materials

Steel, stainless steel, aluminium, brass, copper, lead, light and medium scrap as well as car bodies.

Auxiliary equipment

Loading rig and power unit for the mobile version of the press up to size ArnoPress D 150. For the larger systems, a pre-filling bench can be offered for rapid car body processing.





technical data

2 Rams

3 Rams

| | Arno® Press D | 80-2 | 100-2 | 100-3 | 150-3 | 300-3 |
|-------------------------|----------------------|-------------|--------------|--------------|--------------|--------------|
| Standard bale size | mm | 400x300 | 600x200 | 300x300 | 400x400 | 600x400 |
| | [in] | [16x12] | [24x8] | [12 x 12] | [16 x 16] | [24x16] |
| Optional bale size | mm | - | 600x400 | 400x400 | 600x400 | 400x400 |
| | [in] | - | [24x16] | [16x16] | [24x16] | [16x16] |
| Power main cylinder | kN | 800 | 1,000 | 1,000 | 1,500 | 3,000 |
| Bale density steel | kg/dm ³ | <2.0 | <2.5 | <3.0 | <3.0 | <3.0 |
| Bale density aluminium | kg/dm ³ | <1.0 | <1.0 | <1.2 | <1.2 | <1.2 |
| Bale density copper | kg/dm ³ | <3.0 | <3.0 | <3.5 | <3.5 | <3.5 |
| Capacity* steel | t/h | <2.0 | <4.0 | <5.0 | <10.0 | <30.0 |
| Capacity* aluminium | t/h | <0.8 | <1.2 | <2.4 | <4.0 | <11.0 |
| Capacity* copper | t/h | <2.5 | <4.5 | <6.0 | <12.0 | <35.0 |
| Cycle time | s | 45 | 45 | 50 | 50 | 55 |
| Driving power standard | kW | 22 | 22 | 30 | 90 | 120 |
| Driving power increased | kW | - | - | 37 | 110 | 150 |
| Footprint | m x m | 4.0x1.6 | 5.0x1.6 | 6.2x3.8 | 7.0x5.0 | 7.0x8.0 |
| | [ft] | [13 x 5] | [16 x 5] | [20 x 13] | [23 x 16] | [23 x 26] |

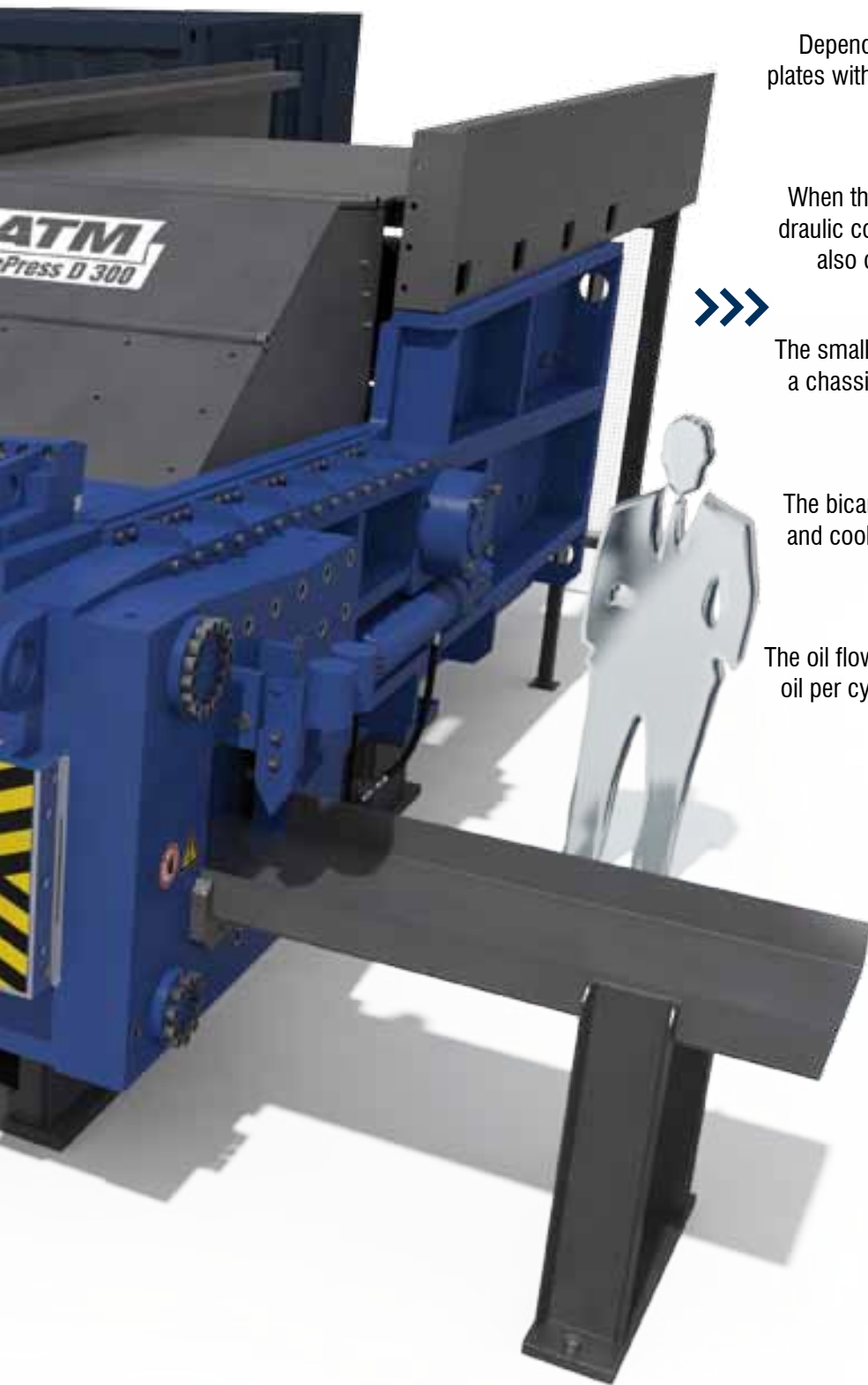
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> Baling Press **ATM** ArnoPress D

ArnoPress D for the packaging of light and medium scrap.





Wear plates

1

Depending on the purpose of the press we offer wear plates with special square-, trapezoid- and wave-shaped profiles in various material qualities.

Container

2

When the press is installed outdoors electrical and hydraulic components can be placed in containers, which also offer additional noise protection and reduction.



Mobility

3

The smaller presses of this series can be equipped with a chassis and the mobility can be further increased by adding loading cranes.

Hydraulic tank

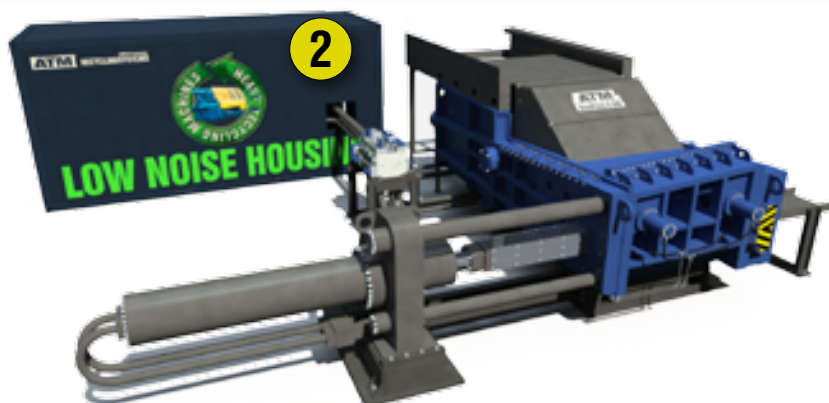
4

The bicameral system guarantees the supply of filtered and cooled oil to the performance-controlled hydraulic pumps.

PZT Pump activation technology

5

The oil flow technology regulates the required quantity of oil per cylinder, thereby minimising the necessary drive energy of the press.



> Shredder **ATM** ArnoShred



ArnoShred for cutting different materials.

Ferrous and non-ferrous metal-swarf, like:

- Steel
- Stainless steel
- Aluminium
- Copper
- etc.

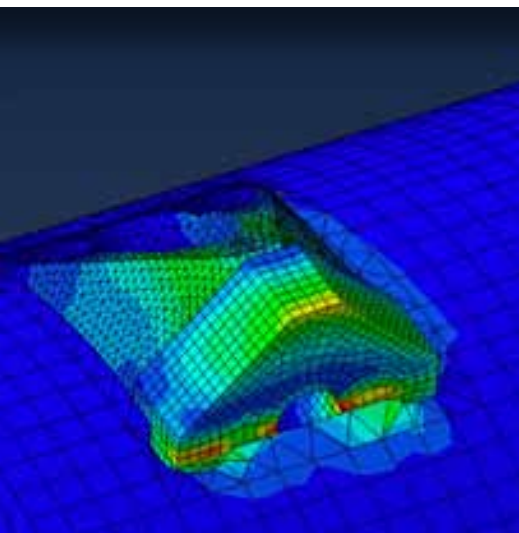
other waste materials:

- Electronic devices (WEEE)
- Plastics / Foil
- Bulky waste
- Tyre wire, Cable
- etc.

Single Shaft Shredder

Specially designed for metals. All surfaces are covered with high resistance Hardox wear plates. Knives and screens with different geometrical forms and in different materials are available. The innovating feature is the tramp metal discharge opening. All lump parts are

ejected during the shredding process to protect the tool and increase it's lifetime. Additionally a friction clutch protects the drive mechanism against overload. Thereby the ArnoShred resists extreme conditions on scrap yards.





Energy Saving System
Due to the patented extraneous material ejection and the friction clutch less energy for cutting is needed.

Patented Feed System
For optimal distribution to the shaft, there are up to 3 feeders.

Friction Clutch
Our machines are equipped with a friction clutch to avoid damages with the axle.

Tramp Metal Discharge
If needed, hard metal pieces can be ejected into a separate container, to guarantee clean material for the following processes.



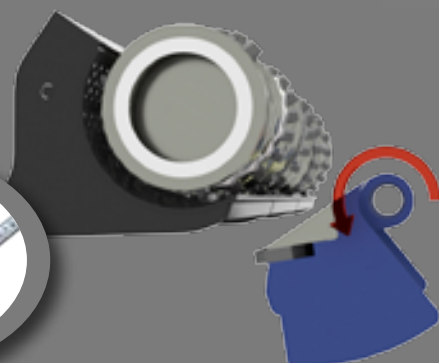
technical data

| | Arno® Shred | 700 | 1400 | 2100 |
|-----------------|-------------|-------------------------------|---------------|---------------|
| Length of rotor | [mm] | 700 | 1,400 | 2,100 |
| | [in] | 27.6 | 55.1 | 82.7 |
| Drive | [kW] | 30 | 75 | 150 |
| Type of drive | | hydraulic, electrical | | |
| Feed opening | [mm] | 1,200 x 700 | 1,200 x 1,400 | 1,200 x 2,100 |
| | [in] | 47.2 x 27.6 | 47.2 x 55.1 | 47.2 x 82.7 |
| Shaft diameter | [mm] | 450 | 450 | 450 |
| | [in] | 17.7 | 17.7 | 17.7 |
| Shaft speed | | variable | | |
| Feed | | depends on material | | |
| Knives | | bolted, welded | | |
| Screen basket | | variable, depends on material | | |

YOUR MATERIAL?



4



2



Screen Drum

ATM ArnoSort



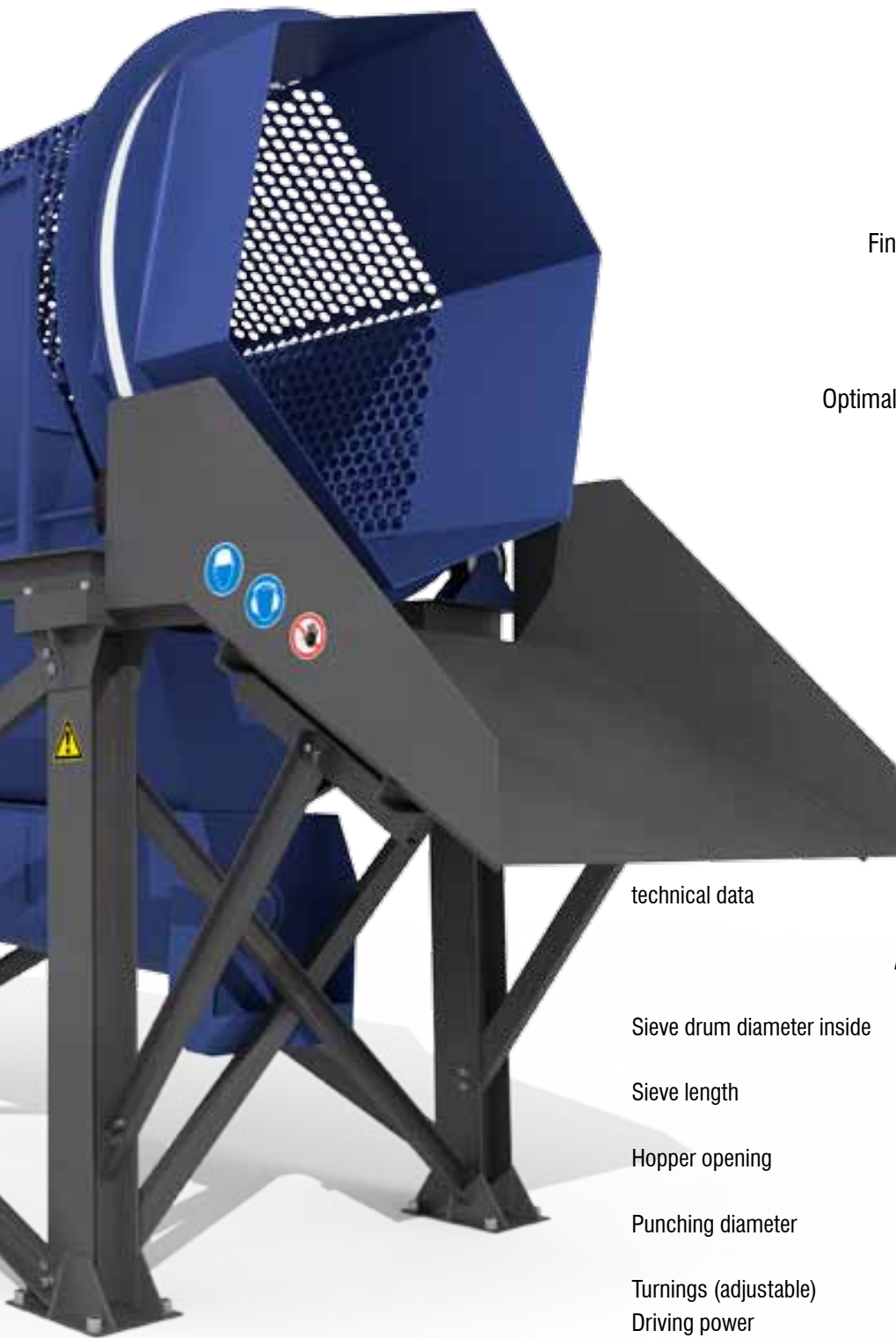
ArnoSort to prepare swarf to get highest quality briquettes.

Screen Drum

The value added of the recycling process comes from a sophisticated sorting technology. Only if you can reduce the energy-intensive shredder process to a minimum, is an efficient preparation of the chips possible. For a shredder capacity of 10 tons swarf per hour it's possible to reduce the power

consumption up to 100 kW with the additional sorting process. Supplemental wear costs caused by extraneous material parts are reduced up to 10 Euros per tonne. The resulting improved quality briquettes and a possible de-oiling increase the value of the briquettes in addition.





Wear Plates

Wear plates in various material qualities and with different punching.

1

Vibration equipment

Fine screening by an additional vibrating sieve with longitudinal deflectors.

2

Sorting line

Optimal coordination with shredder and centrifuge.

3



technical data

Arno® Sort

2000

| | | |
|----------------------------|-------|---------------|
| Sieve drum diameter inside | [mm] | 1,900 |
| | [in] | 27.6 |
| Sieve length | [mm] | 6,000 |
| | [in] | 235 |
| Hopper opening | [mm] | 2,400 x 2,300 |
| | [in] | 94.5 x 90.5 |
| Punching diameter | [mm] | 45 |
| | [in] | 1.8 |
| Turnings (adjustable) | [rpm] | <10 |
| Driving power | [kW] | 7,5 |
| Footprint | [m] | 9 x 2.5 |
| | [ft] | 29.5 x 8.5 |





➤ Cast Iron Breaker **ATM** ArnoBreak C

Cast iron breakers can be delivered in two different sizes for the efficient processing of gear housings, engine blocks and other cast iron scrap. The ArnoBreak C 400 is used mainly for small parts of scrap. The shear movement of the serrated breaking arm generates high breaking power producing optimal part sizes for smelting. Unlike cutting processes, the breaking process works without knives.

Raw material recycling

A regular part size is very important for the feeding and smelting process of cast iron parts. Cast iron breakers can achieve this optimally.

Applications

Due to their specific application, cast iron breakers are mainly used in foundries or large scrap yards.

Breakable materials

Brittle cast iron parts such as gear housings or engine blocks, moulds, cast iron pipes etc.

Auxiliary equipment

Remote control, air conditioned cab, loading rig, power unit and conveying systems can be offered as auxiliary equipment.

technical data

| | Arno [®] Break C | 120/400 | 200/600 |
|-------------------------|---------------------------|---------|---------|
| Breaking force min. | kN | 1,200 | 2,000 |
| Breaking force max. | kN | 4,000 | 6,000 |
| Part length max. | mm | 2,000 | 3,000 |
| Part size ejection max. | mm | <300 | <300 |
| | [in] | [<12] | [<12] |
| Capacity* cast iron | t/h | 10 | 16 |
| Cycle time | s | 60 | 60 |
| Driving power standard | kW | 22 | 44 |
| Driving power increased | kW | 30 | 60 |
| Footprint | m x m | 5.3x2.5 | 7.1x3.3 |
| | [ft] | [17x8] | [23x11] |

*depends on material





Rail Breaker ArnoBreak R

The ArnoBreak R rail breaker was developed to process railway rails effectively and can be delivered in two variants. The stationary design permits the processing of rails of up to 120 m in length. A magazine is used for feeding the rails into the breaker.

There is a mobile version for use directly on the track, which is fitted with a diesel power unit and loading rig. It can efficiently break rails of around 24 m in length into short sections measuring 300 to 1000 mm.

The mobile rail breaker, which is fitted on an extendable semi-trailer, can be moved to a different location very quickly. A special notching and breaking process ensures that the rails are broken with minimum tool wear.



Applications

Rails are cut up immediately after disassembly (mobile ArnoBreak) in order to avoid the need for special transport. Alternatively, the stationary rail breaker also offers a feeding magazine, which reduces personnel costs.

Breakable materials

Brittle railway rails with the highest possible alloy proportion. Soft tram rails, however, are not breakable.

Raw material recovery

Railway rails represent high-value scrap for foundries.

Auxiliary equipment

Remote control, air-con. cab, loading crane, power unit and rail magazine (for stationary rail breakers). In the case of the mobile rail breaker, the control, the crane and the power unit are fitted on an extendable semitrailer.

technical data

| | Arno® Break R | 125 S | 125 M |
|------------------------------|---------------|--------------------|--------------------|
| Breaking force | kN | 1,250 | 1,250 |
| Notching / suppression force | kN | 1,250 | 1,250 |
| Break length min. | mm | 300 | 300 |
| Break length max. | mm | 1,000 | 1,000 |
| Rail capacity* | t/h | <10 | <9 |
| Cycle time | s | >7 | >7 |
| Driving power | kW | 22 | 22 |
| Driving power increased | kW | 30 | 30 |
| Footprint | m x m [ft] | 2.5x15.0 [8x49] | 2.5x15.0 [8x49] |

*depends on material





Car Crusher **ATM** ArnoPress A

In new cars there are more and more expensive materials and electronic components installed. The efficient recovery of this complex car scrap can be accomplished by careful disassembly or by an optimized shredding and sorting process.

For the efficient transport to shredder plants, it's necessary to gently bale the car bodies.

This is the best way to win back these valuable components without destroying them.

technical data

| | Arno[®] Press A | 220 |
|---------------|---------------------------------|---------------------|
| Press force | kN | 2x 1,100 |
| Loading area | mm x mm | 5,500 x 2,200 |
| | [in x in] | 217 x 87 |
| Box closed | mm x mm x mm | 4,500 x 2,200 x 350 |
| | [in x in x in] | 177 x 87 x 14 |
| Capacity | cars per hour | <30 |
| Driving power | kW | 45 |
| Footprint | m x m | 9.5 x 3 |
| | [ft x ft] | 31 x 10 |





Service by **ATM**

Product range

ATM Recyclingsystems can supply parts for all on the market scrap shears and presses. The pressing tools, knives, guide rails and wear plates are made of highly specialized steel with a high strength and a high cut resistance with a very long life cycle. Furthermore we can offer for all machines equipment such as: knife distance plates, pass pieces, knife holders, screws, nuts, sockets etc.. It's even possible to supply parts for the first Arnold built press from 1953.

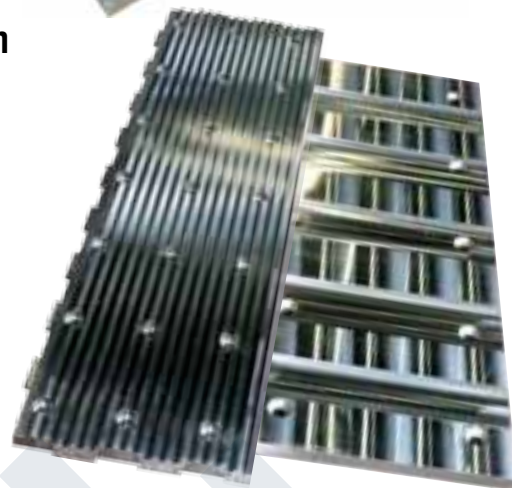
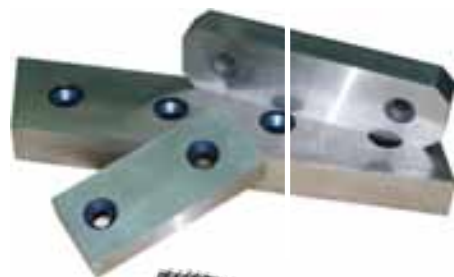
Experience

Knowledge and experience makes ATM Recyclingsystems a reliable partner in the industry. Our program includes reparation, maintenance, service and consulting.

Contact

For all further questions please do not hesitate and contact one of our members of the sales or service staff.

www.atm-recyclingsystems.com



BRIQUETTING >



Titan



Copper



Aluminium



Tyre wire



Steel



Stainless steel



Grinding slurry



Circuit boards

BALING >



Titan



Copper



Aluminium



Steel



Tyre wire



Stainless steel

BREAKING >



Rails



Engine blocks

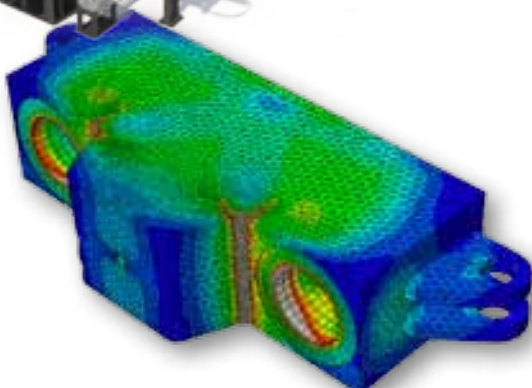
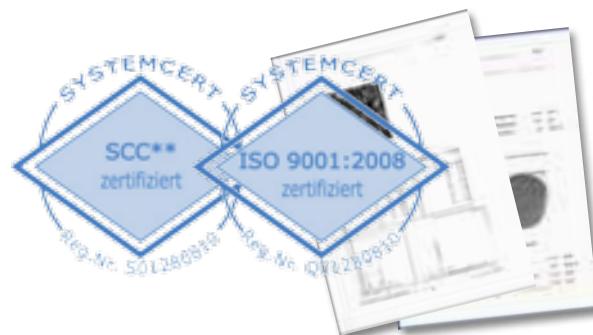
CUTTING >



Shear scrap

Quality assurance, Research & Development

Our aim is to develop, produce and service solid and reliable technology for metal recycling. In our testing and innovation centre further development and adjustment of our products is constantly carried out. All products are developed through tests and experiments with customer specific materials. Due to constant cooperation with universities and research institutes the machine generations undergo steady improvements in accordance with the latest technical standards (for example the numerical simulation process).



ATM Reliability

Our employees are at your disposal almost around the clock. The flexible and experienced ATM customer service department and extensive spare parts and service management set apart the customer-oriented effort of all ATM employees. Our team of motivated, qualified

and responsible employees handles the tasks and needs of our customers. They are pleased to meet the challenge of taking on your tasks.

Our satisfied customers are proof of this!
Worldwide!





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