

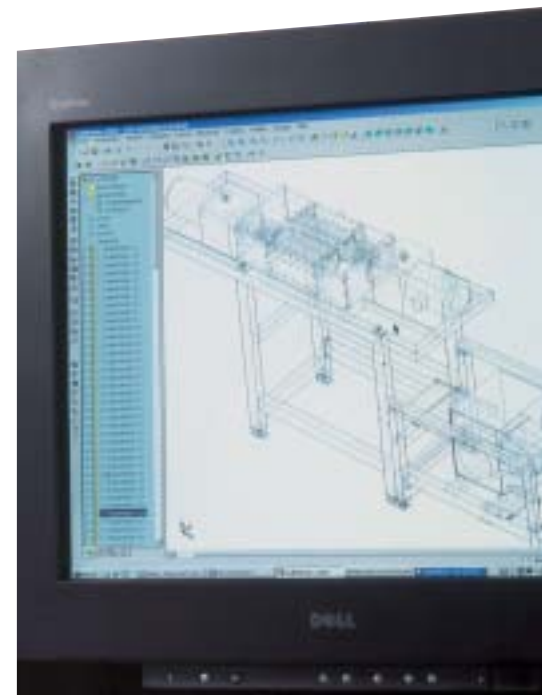
We fabricate „your“ system

MARTIN YALE designs each VZ/VZM heavy duty shredder to fulfil customer-specific needs by using a highly flexible modular system. This concept assures fulfilment of your requirements and provides you with performance reserves at favourably attractive investment costs.

Competent contact persons are available to provide you with accurate advice and assistance for all of your questions and concerns. Many years of experience enable us to offer quick, efficient solutions which fulfil your individual requirements. Each project is implemented in a clear-cut, logical fashion, allowing you to follow the development of your shredder in detail, and issue manufacturing approval with confidence.

Continuous quality assurance accompanies all project phases from manufacturing to final delivery. The shredder systems are assembled and installed at your facilities by trained MARTIN YALE technicians and handed over to the customer ready to operate.

Thanks to our widespread service network, you can rest assured that a qualified technician will be on-site quickly if service should become necessary.



VZ/VZM SERIES
Heavy Duty Shredders
600 - 2,100 kg/h



Technical changes and colour variances reserved. 9/2006

Further data shredder product lines from MARTIN YALE...

intimus® TARLOS

85007



Technical Specifications

VZ/VZM SERIES – Heavy Duty Shredders

High performance shredders for professional use by disposal service providers

- High throughput volumes of 600 to 2,100 kg per hour with minimal energy consumption
- Security level 3 or 4 per DIN 32757-1 with certificate
- Minimal personnel requirements thanks to fully automated operation



VZ 17.00 / VZ 18.00
Inline set-up



VZM 17.00 / VZM 18.00
Inline set-up



VZM 19.00
Angular set-up,
90° right



VZM 20.00
Angular set-up,
90° right

Technical Data		VZ/VZM 17.00	VZ/VZM 18.00	VZ/VZM 19.00	VZ/VZM 20.00
Security level	DIN	4 / 3	3	3	3
Actual throughput	kg/h*	600 / 650	850	1,000	2,100
Motor power	kW (approx.)	15.8 - 16.5	17.5 - 18.2	23.3 - 24.0	31.5
Feed conveyor included		yes	yes	yes	–
Dimensions L x W x H	cm** (approx.)	VZ 540 x 115 x 255	VZ 540 x 115 x 255	VZ 585 x 103 x 285	VZ 436 x 181 x 309
		VZM 635 x 115 x 290	VZM 635 x 115 x 290	VZM 741 x 103 x 311	VZM 436 x 181 x 309
Weight	kg (approx.)	VZ 2,200 / VZM 2,500	VZ 2,200 / VZM 2,500	VZ 2,600 / VZM 2,900	VZ 4,500 / VZM 4,500

*Values ascertained with new cutting systems, depends upon material to be shredded, supply power and feed system.
**When using in-line configuration of the models VZ/VZM 17.00, 18.00 and 19.00: with standard feed conveyor.

Safety Devices included as standard equipment with High Capacity VZ/VZM Shredders:

- Emergency stop switch
- Motor overload protection by means of temperature sensor and over current relay



Extremely Easy Operation

- All operating functions are controlled electronically after the start key have been activated
- Clear-cut control panel
- Fully automated control via micro-computer with automatic shutdown when in idle operation
- Auto-reverse with automatic re-start in the event of overload
- All parameters can be individually set during installation



Continuous Feed

- Material is fed with a rugged, studded conveyor
- Conveyor belt with large capacity feed hopper allows for filling at an ergonomic height
- Large sturdy studs prevent materials from sliding back
- Fully automated power supply and operation of the feed conveyor are managed by the shredder



Stage 1: Pre-Shredding

- Thick bundles of paper are processed just as easily as filled ring binders
- Rough pre-shredding of materials is accomplished by means of abrasion-resistant cutting cylinders made of hardened tool steel
- Ideal preparation of materials to be shredded for subsequent processing steps
- Low-maintenance cutting system consisting of individually interchangeable cutters and scraper blades, which can be repeatedly re-ground



Integrated Conveyor Belt

- Covered transport from pre-shredding to the security cutting system
- A metering screw prevents paper jam and assures problem free operation
- Overfill protection is provided by means of a limit switch



VZM series: With Integrated Magnetic Separator

- No time-consuming removal of metal parts before shredding – the magnetic separator automatically removes the ferromagnetic parts which are typically included in ring binders and hanging file folders
- Protects the security shredder from excessive wear due to metal parts
- Metal parts are accumulated separately in a mobile receptacle



Stage 2: Security Shredder

- Precision cutting cylinders made of special hardened steel with metering device assure high throughput volumes with minimal wear and low energy consumption
- During security shredding, materials are reduced to particle sizes in accordance with security level 3 or 4 (depending upon selected cutting system) per DIN 32 757. A certificate will be enclosed with the machine
- Overfill inhibited by means of limit switch



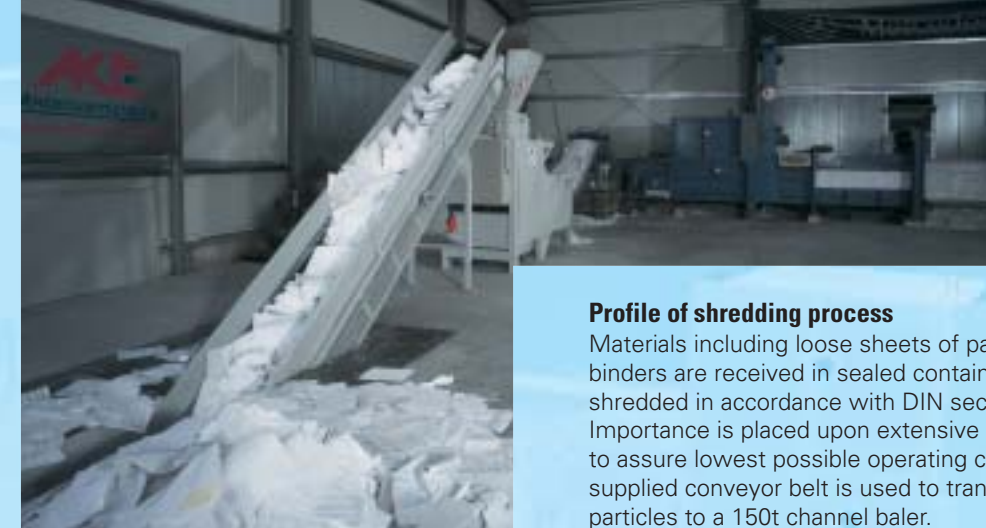
Outstanding ease of maintenance

- All relevant covers included on the machine are equipped with quick release fasteners
- Access is thus quick and easy for cleaning, repair and maintenance

A Modular System.....with Flexibility and.....Top Performance



VZ/VZM SERIES – Heavy Duty Shredders ...proven in Continuous Daily Use



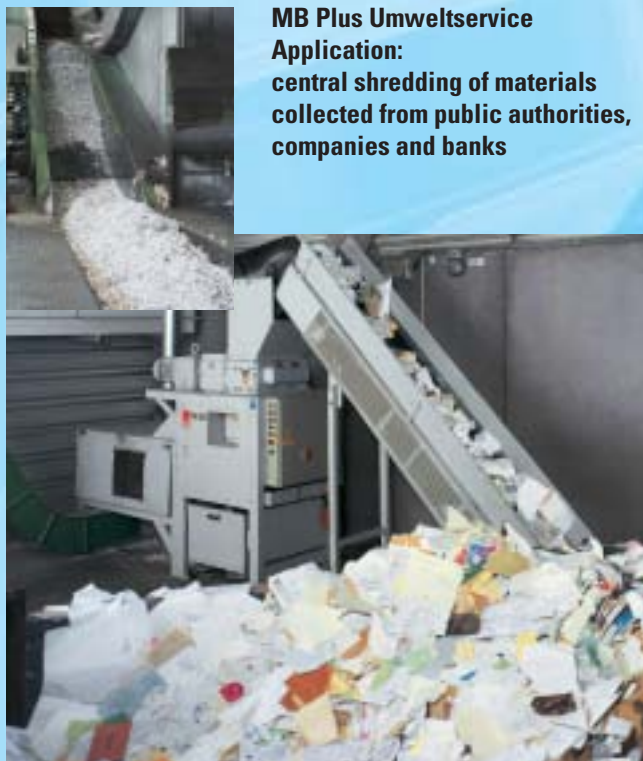
Profile of shredding process

Materials including loose sheets of paper and entire ring binders are received in sealed containers and must be shredded in accordance with DIN security level 3. Importance is placed upon extensive automation in order to assure lowest possible operating costs. A customer supplied conveyor belt is used to transport shredded particles to a 150t channel baler.

Solution

The transport containers are emptied in front of the system with the help of a forklift. Materials are then pushed into the feed hopper and transferred to the conveyor belt. From this point the process is fully automated right through to compacting into large, marketable bales with approx. 600 kg weight by means of a channel baler.

AKC-Shredding service
Application:
central shredding of materials collected from public authorities, companies and banks



MB Plus Umweltservice
Application:
central shredding of materials collected from public authorities, companies and banks

Profile of shredding process

Shredded materials must comply with security level 3. Limited available space must be utilised in an optimised fashion. An already existing trough for the feed conveyor is to be integrated into the system, as well as an existing scraper chain conveyor for the removal of shredded particles.

Solution

Materials are dumped from the truck onto the floor in front of the system, and are pushed into the feed hopper at floor level. The conveyor belt continuously feeds material to the shredder. Shredded particles are transferred to the scraper chain conveyor after shredding, and are transported to a bunker where they are compacted into large, marketable bales by means of a channel baler.



Commerzbank AG
Application:
shredding of all obsolete paper documents from all Commerzbank facilities in Frankfurt, Germany

Profile of shredding process

Utmost importance is placed upon comprehensive data security. Materials are received in sealed containers and must be shredded in accordance with security level 4. The compacting container must be kept inside the building. The system must be linked to the building's central fire alarm system.

Solution

Two high capacity shredders process materials from the storage containers simultaneously. An exhaust system was installed in order to assure dust-free operation to the greatest possible extent. Materials are transported from the shredders' discharge outlets to the compacting container via a scraper chain conveyor. The opening in the wall for the conveyor system is secured with a special fire bulkhead.

Kasseler Workshop, Workshop for the Handicapped
Application:
central shredding of materials collected from public authorities, companies and banks



Profile of shredding process

Various materials ranging from loose sheets of paper to filled ring binders must be shredded in accordance with DIN security level 3. Operation and layout of the system must be devised for use by disabled employees.

Solution

Specially designed sorting stations have been implemented. An extraction system for the discharge of shredded particles and air purification has also been installed and enhanced noise reduction is included in order to assure fulfilment of disabled persons' working conditions. Clear-cut, centralised operation is assured by means of a control panel. Shredded particles are compacted by a stationary baler with container changing system located outside of the building.



Wetteraukreis Foundation for the Disabled, Reichelsheimer Workshops

Application:
central shredding of materials collected from public authorities, companies and banks

Profile of shredding process

Materials received in special storage containers must be shredded in accordance with DIN security level 4. Materials range from loose sheets of paper to ring binders filled with documents. Emptying of the transport containers must be accomplished in an ergonomic fashion, which can be managed by disabled employees.

Solution

Transport containers are emptied by means of an electro-hydraulic lift and turn mechanism. A special extraction system reduces dust discharged to the atmosphere to a minimum. After materials have been shredded, they are continuously fed to the compacting container in front of the building. Weather resistant transfer of shredded material is assured.

A Modular System.....with Flexibility and.....Top Performance



VZ/VZM SERIES – Heavy Duty Shredders

The Modular System for Customised Solutions

System components, as well as configuration and expansion by means of a modular concept, allow for adaptation to your individual requirements

Material Feed

The conveyor system consists of a rugged, low-maintenance rubber conveyor belt and a hopper for manual feed. The system processes the material for shredding virtually on its own thanks to ideal matching of conveyor studs and belt speed. The fully automated power supply and the operation are managed by the shredder. The conveyor belt is available in a variety of special executions in order to assure ideal adaptation to local conditions and work sequences, for example **side flexing conveyor belt with floor hopper** for feeding with a wheel loader, or with a hopper that is fed by means of lift and turn mechanism. Belt speed can be varied by means of an optional **frequency converter**, allowing for adaptation to different types of material to be shredded. Electro-hydraulic **lift and turn mechanisms** are available for emptying customer specific storage containers.

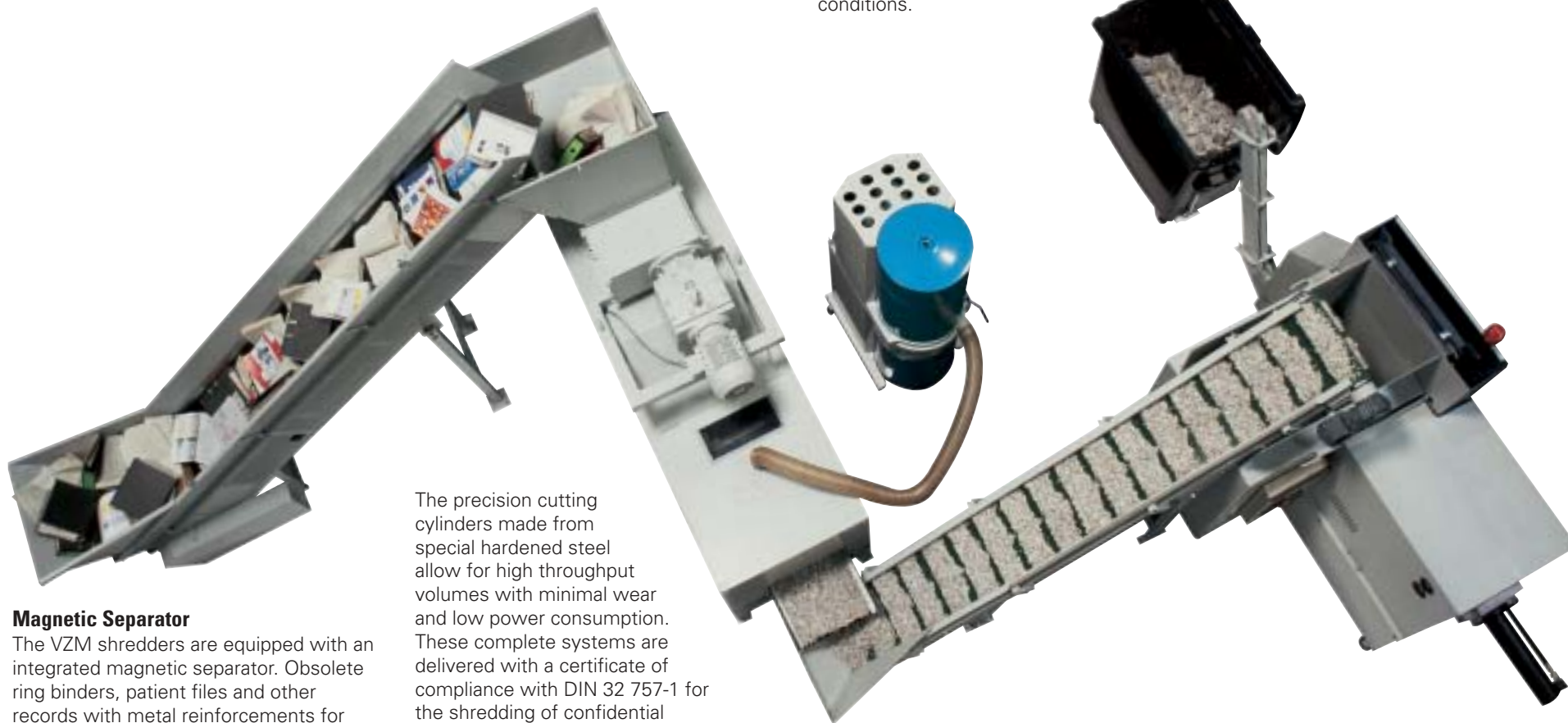


Pre-Shredder

Thick bundles of material are cut into broad strips of 30 to 40 mm in the pre-shredder. The large cutting area of nearly 400 x 550 to 700 x 750 mm and motor power output of 7.5 to 15 kW assure uninterrupted material flow, high throughput volumes and ideal pre-processing for subsequent security shredding.

Security Cutting System

In the second shredding stage which assures reliable data security, cutting systems are utilised with 7.5 to 15 kW of motor output power (depending upon power requirements). The throughput volumes are ranging from 600 to approximately 2,100 kg per hour (depending upon material to be shredded).



The precision cutting cylinders made from special hardened steel allow for high throughput volumes with minimal wear and low power consumption. These complete systems are delivered with a certificate of compliance with DIN 32 757-1 for the shredding of confidential documents on security level 3, and secret documents on security level 4.



Expandable controls

All system functions are monitored and controlled by a micro-computer in a fully automated fashion. Upstream and downstream devices can also be subsequently integrated into the controls with minimal effort. This will assure maximum process reliability of the entire system and an efficient adaptation to prevailing operating conditions.

Conveyor technology

The shredding systems can be adapted to local conditions at the discharge side as well. They can be linked to special **conveyor belts, scraper chain conveyors or vacuum extraction systems** for transporting shredded particles to storage containers, or to additional process steps in compacting containers or channel balers.



The shredders can be equipped with special accessories for operation in combination with discharge conveyor belts. The conveyor system is provided with supply power from the shredder in such cases, which also controls conveyor system functions. Complex conveyor systems can be connected to the shredder via control cables. The shredder is then able to evaluate incoming messages regarding operating states and fill-levels. Conversely, the shredder can transmit start and stop signals to the conveyor system's controls autonomously.

Storage and compacting

Specially suited storage and compacting equipment is recommended for further processing of shredded particles. Simple storage solutions (containers), as well as specially configured compacting equipment for volume reduction can be supplied upon request. Depending upon the respective application, **press containers** can be used for space saving storage and transport, **channel presses** can be provided for enhanced marketability, or **pelletising presses** can be utilised for higher security requirements.

Air Purification Equipment

Dust particles are inevitably generated during shredding as a result of the cutting and tearing process. Materials to be shredded are also frequently dusty and this dust is released into the atmosphere during the shredding process. Working conditions can be significantly improved through the use of a **dust extraction system**. Thanks to integrated castors and a flexible extraction hose, the system can be installed next to the shredder in a space saving fashion.

Miscellaneous

If required, operation of the system can be facilitated with a **separate control panel**, which can be installed, for example, in the material feeding area. It is fully equipped with all operating controls and display elements, and is connected to the shredder's control cabinet. The control panel can be equipped for wall mounting, or with a base for flexible positioning on the floor as required by the customer.

A Modular System.....with Flexibility and.....Top Performance