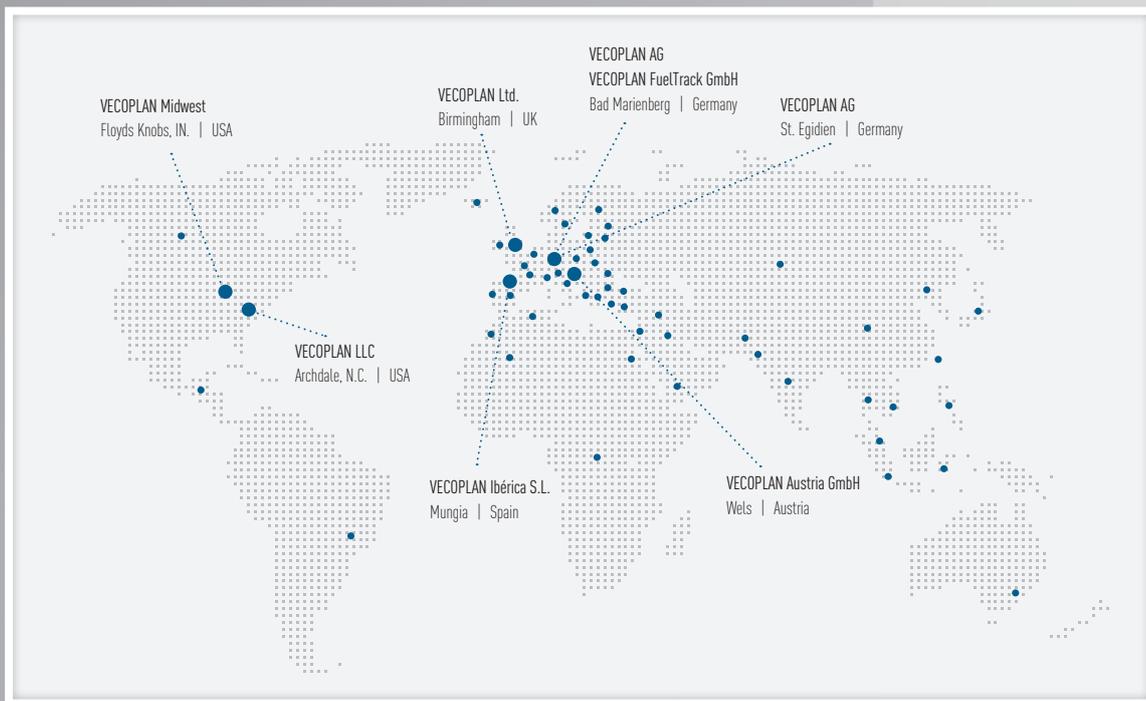




DOMESTIC & COMMERCIAL WASTE

CREATING VALUE FROM WASTE

**Vecoplan**<sup>®</sup>



## VECOPLAN INTERNATIONAL

Waste avoidance, conservation of resources and efficient use of recyclable materials are among the most urgent challenges and tasks of our time. The importance of environmental awareness and sustainability is increasing on a daily basis. Our company has been successfully tackling these challenges for more than 40 years, and today we are a leading partner in the international wood and recycling business, with numerous subsidiaries and sales offices worldwide.

VECOPLAN AG develops, manufactures and markets technologically sophisticated machines and plants for shredding, conveying and processing primary and secondary raw materials in production processes and recycling. Our customers benefit from cutting-edge technology, made possible by continuous research and development combined with in-house production. Our track record is impressive: a number of patents testify to our know-how. In order to meet the demand for ground-breaking technology and outstanding quality, we have focussed our operations on our core competences. Our Service Division complements this structure.

We take our customers through the entire process, from planning to production, delivery, installation, commissioning and on to maintenance of the complete plant. VECOPLAN AG delivers the highest sustainable quality standards, whether it be an individual machine or complete plant, according to our customers' specifications. Of course, we are certified to EN ISO 9001.

Made in Germany

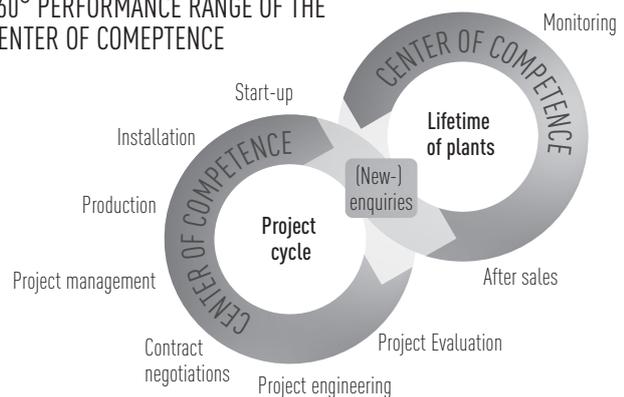


## MASTERMINDS – POWER FOCUSED

The waste market is one with a global outlook and presence; the markets are in a constant state of flux, and not only as a result of internationalisation. We at VECOPLAN specialise in the development and production of high-quality machinery and turnkey plants for the processing of domestic and commercial waste.

Our knowledge and experience are concentrated in our Center of Competence, which keeps a close watch on developments in the Domestic & Commercial Waste market segment. In the interests of our customers, we are in a position to respond rapidly to market changes, identify opportunities, work with you to refine specific aspects of products and offer individual solutions. Our service portfolio, from planning to commissioning, includes the complete range of systems technology. From the outset, our Center of Competence provides a professional project planning service and delivery of your systems and plants, all from a single source and to the highest quality standards. On schedule. Promptly. With practical experience and customer orientation.

### 360° PERFORMANCE RANGE OF THE CENTER OF COMPEPTENCE



# THE RIGHT SOLUTION FOR EVERY MATERIAL



Domestic waste



Commercial waste



Other waste streams

## Solutions for the processing of:

- Domestic waste
- Commercial waste
- Other waste streams

VECOPLAN provides innovative solutions from a single source for the environmentally friendly and sustainable processing of municipal and commercial waste. The components we manufacture and sell for shredding, conveying, screening, separating and storing are assembled into turnkey systems in line with the project requirements. We know all there is to know about process engineering and cover the entire value chain. Our customers – whether they specialise in simple processing or require complex systems – hold VECOPLAN technology in high regard.

The products obtained go on for further processing to generate energy:



High calorific value fraction



Energy recovery



Recyclable



Recycling



For disposal (inert)



Landfilling

## WASTE STREAMS ARE VERSATILE – JUST LIKE OUR TECHNOLOGY

The various quality parameters and laws place strict demands on the individual process steps. Innovative process solutions offer you the security of always being able to produce marketable products from the various different materials streams.

We have the perfect processing solution for each and every mixture of wastes. Differing waste mixtures and customer objectives call for individual solutions, optimally tailored to the particular application.

Our Center of Competence has the know-how required to define the necessary process steps and design plants with which the desired output of material streams are produced in marketable quality.

## Shredding



Example: Double-shaft shredder (WZ)

## SHREDDING IS OUR CORE COMPETENCE

Pre- and re-shredding are key components of waste processing. Separable material streams and high-quality alternative fuels can be produced with the various models of shredder in our product range.

## Conveying



Example: Belt conveyor

## CONVEYING TECHNOLOGY – TAILOR-MADE

Our product range includes continuous conveyors for the linking of individual process steps. Different widths and versions ensure optimal adaptability to the process and conditions on-site.

## Screening

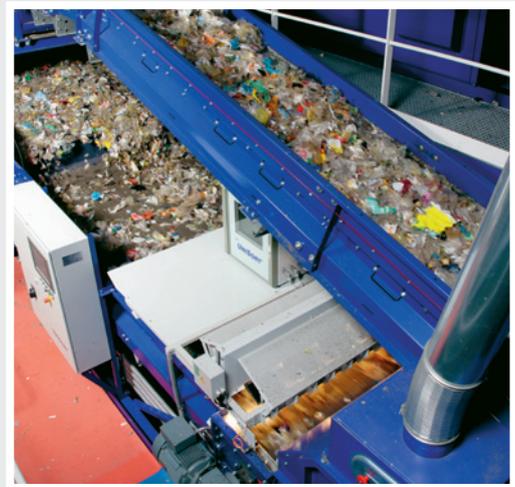


Example: Screening machine

## GETTING THE MOST OUT OF EVERYTHING

Screening machines are used to separate inert matter, screen organic fractions and produce different particle sizes. We integrate drum, disc, star and vibrating screens into the process chain.

## Separating



Example: Metal detector (MSG)

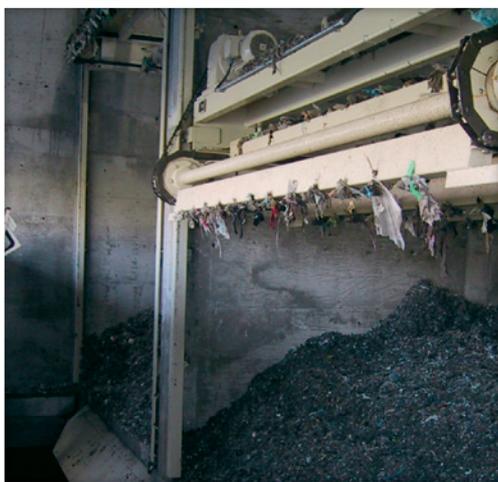
## FOCUSING ON THE ESSENTIAL

The main requirements of the modern processing plant include the recovery of recyclables such as ferrous metal, non-ferrous metal, mixed plastics and fractions of single plastics as well as the separation of inert matter. For separation, processing units such as air separators, ballistic separators, density sorters, overbelt magnetic separators, eddy current separators and optical sorting systems are combined in the individual process steps in accordance with the project requirements.

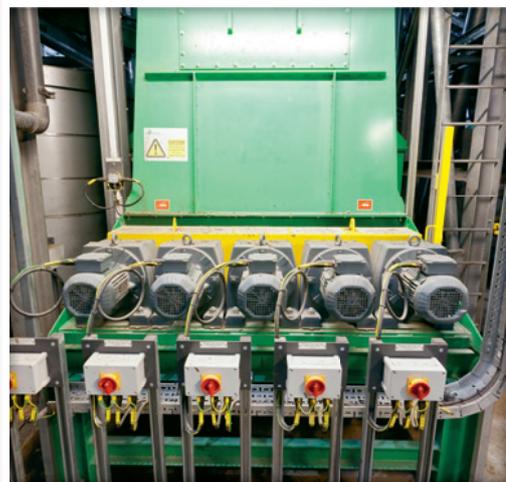


Storing

Dosing



Loading and unloading conveyor (BEF)



Example: Dosing unit

## STORAGE IS NOT AN ART – IT IS A SCIENCE

Storing the processed alternative fuels places great demands on the storage systems used. We offer large storage volumes coupled with high throughput for the feeding and discharge of bunker systems.

## SUPPLYING THE EXACT MEASURE REQUIRES THE RIGHT TECHNOLOGY

The regulated feeding of downstream, mechanical or biological treatment processes places great demands on the dosing systems used. For this, oscillating, screw or push rod systems are used. The strength of our dosing systems is their flexibility, their reliability and their dosing accuracy.



## PROCESSING PLANTS FOR THE WASTE INDUSTRY

Our customers benefit from our decades of experience in the various areas of plant engineering. It is a field we have specialised in ever since the company was founded in 1969 and today we are an international market leader.

We are your reliable partner for plants for the processing of domestic and commercial waste. With our own production facilities in Bad Marienberg, extremely high quality standards, qualified and highly motivated employees and durable products, VECOPLAN sets standards in international plant engineering. The result is well-conceived plants for the processing of alternative fuels or recovery of recyclables.

Not only do you have the support and advice of VECOPLAN's engineers and technicians during planning and realisation, but VECOPLAN's professional project management service ensures that our customers have a competent team on side to come up with the optimal solution to their complex briefs. Why not take advantage of our know-how and the innovative complete solutions we offer.

## DRIVEN BY INNOVATION

The engineers and technicians in our Research and Development department work tirelessly to deliver increasingly superior solutions to meet our customers' varying requirements. A number of patents testify to our technological leadership in the worldwide market.

All VECOPLAN products are continuously refined to ensure that the plants offer optimal economy and benefit to our customers. Our incentive and driving force is the processing of valuable waste materials for use in recycling, thereby preven-

ting damage or harm to the environment. Our engineers and designers are continuously working on concepts and effective solutions for even the toughest assignments.



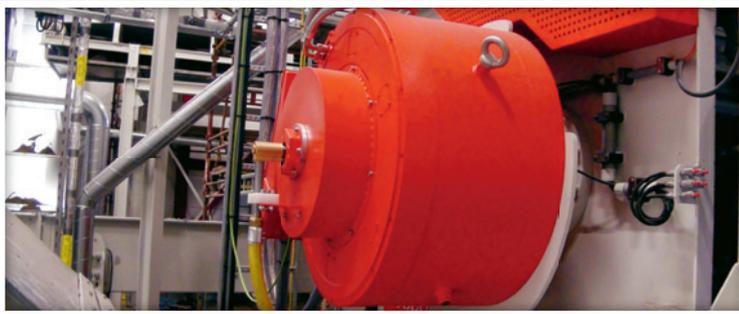
### Belt conveyor

- Flat and troughed conveyor belts available
- Efficient cleaning system for reliable belt cleaning
- Low-maintenance, compact build
- High safety standard



### Pre-shredder

- Highly efficient single- and double-shaft shredders available
- HiTorc® or hydraulic drive
- Machine damage protection for uninterrupted operation



## HiTorc®

Revolutionary shredding technology

- Direct drive motor / permanently controlled synchronous motor
- Greater throughput – lower electricity consumption
- Energy saving of approx. 50% with pre-shredders
- Current peaks are roughly halved (compared with asynchronous motor)
- Compact / quiet / low-maintenance



## VecoBelt

Pipe belt conveyor – for conveying bulk material on the horizontal or on a slight incline

- Continuous distances of up to 400 m
- Low-noise and low-dust conveying as belt enclosed in tube



## Drag chain conveyor

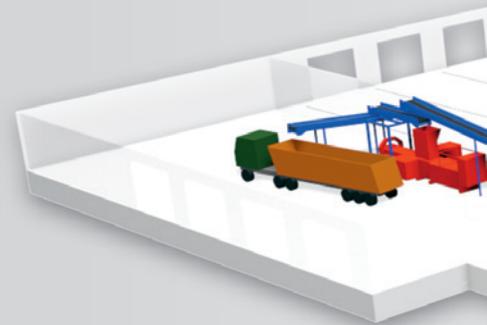
- Completely encapsulated conveying system
- Dust-free conveying
- For surmounting significant height differences in confined spaces



## V-EBS-Rotor

- High mass moment of inertia
- Start-up under load
- Quick and easy knife changing
- Low operating costs

# COMPLETE INSTALLATION OF COMPLEX PLANTS

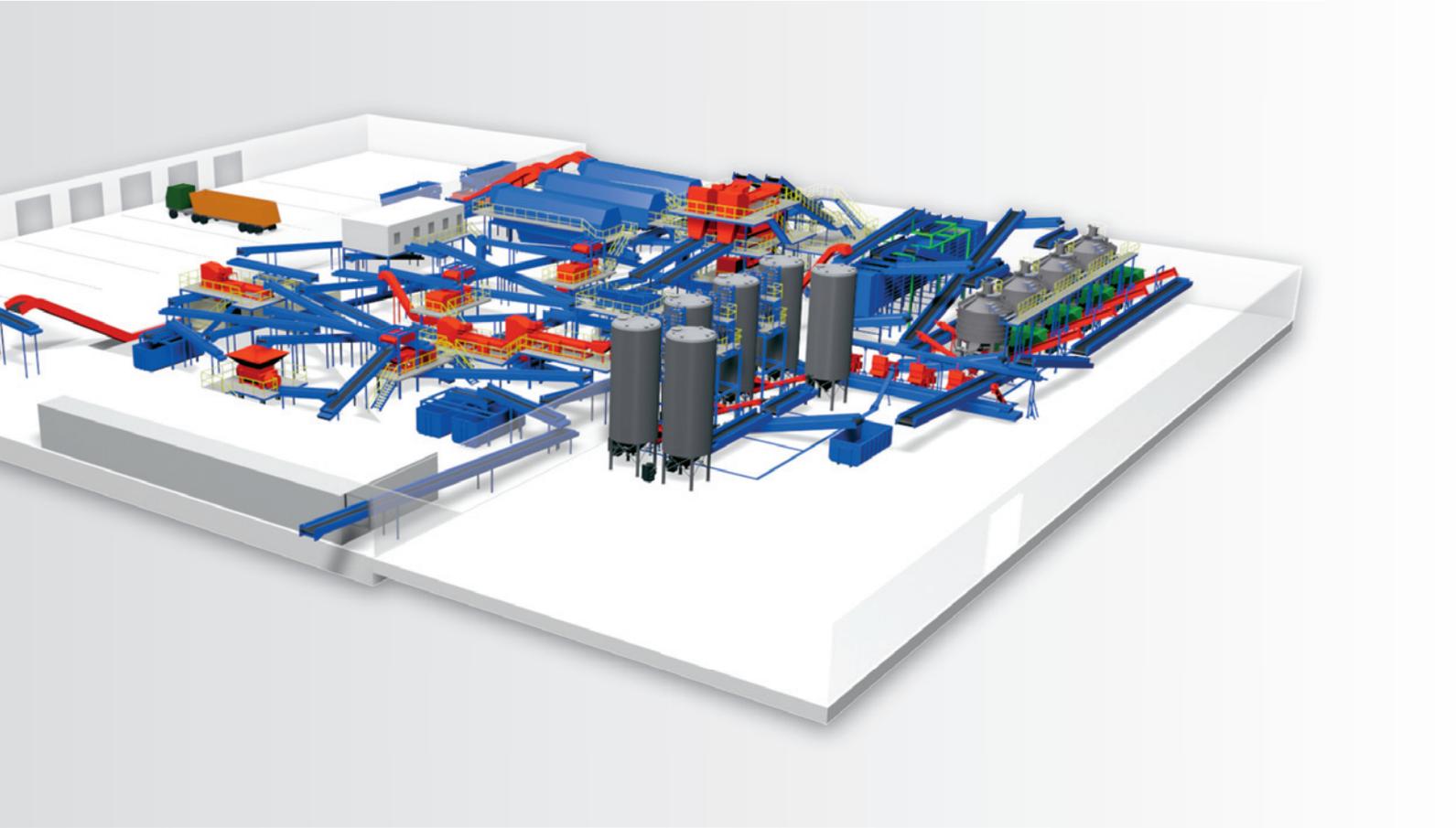


## Electrical engineering tasks

- Drawing up of process descriptions
- Assessment and evaluation of regulations, standards and guidelines
- Development of automation/operation and safety concepts, tailored to customer needs
- Drawing up of measuring point and consumer lists
- Planning and manufacture of the switchgear and control elements incl. documentation, programming and parameterisation
- Adaptation of plant-specific software

## Project management tasks

- Management of the project commission and, as such, assumption of overall responsibility for the project until final acceptance
- All-embracing coordination of interfaces internally and externally, both the technical and organisational side
- Contract management
- Definition of the project goals in line with customer needs
- Project planning, organisation and control:
  - Assembly of the project team in consultation with the departments
  - Detailed planning of the plant concept in close consultation with the customer
  - Drawing up and updating the project overall schedule
  - Planning of resources in consultation with the departments
  - Responsibility for costs and adherence to budget
- Documentation and reporting
- Preparation and execution of project meetings (both internal and external)
- Handover of project to the customer and, internally, to the customer account manager in After Sales



## DURABLE – POWERFUL – SOLUTION-ORIENTED

We are a complete outfitter and worldwide supplier of innovative and sophisticated plants for the global waste industry.

Our service portfolio, from planning to commissioning, includes the complete range of systems technology. The driving forces behind our processing concepts are the conservation of resources and the reduction of emissions. Planning, delivery,

installation, commissioning and service from a single source guarantee plants with maximum availability and economic benefit. We set store by constant development and improvement to ensure our customers remain competitive.

# VECOPLAN POWER: AN EFFECTIVE SYSTEM

We help you to process your waste economically and to conserve resources. By defining the right plant concept from the outset, our specialists lay the foundation that ensures the efficiency of the overall system.

## Domestic waste processing at Bredbury Parkway, UK

The plant in Bredbury was set up in less than a year. 110,000 Mg/a of domestic refuse is processed in the plant in double-shift operation. The organic components go on to be fermented, while high-calorific-value material is processed into an alternative fuel for a local power plant. Metals and non-ferrous metals are set aside for recycling.



Extract of reference list



## SUCCESSFUL PROJECTS

Around the world, we have completed projects with our customers and partners in the field of waste processing. Some "best practise" examples:

- MBS Westerwald GmbH & Co. KG – biological drying  
Capacity: approx. 100,000 t/a
- DAVG Dresdner Abfallverwertungsgesellschaft – biological drying  
Capacity: approx. 85,000 t/a
- AMAV Venezia S.C.A.R.L – biological drying  
Capacity: approx. 160,000 t/a
- Consorzio ACEA – anaerobic fermentation  
Capacity: approx. 75,000 t/a
- MBS IOK IVAREM – biological drying  
Capacity: approx. 150,000 t/a
- Comune di Piombino – mechanical treatment  
Capacity: approx. 50,000 t/a
- ABlar dry stabilate plant – biological drying  
Capacity: approx. 140,000 t/a
- MBS Osnabrück – biological drying  
Capacity: approx. 105,000 t/a
- Consorzio Quadrifoglio S.p.A. – mechanical treatment  
Capacity: approx. 100,000 t/a
- MBT Bredbury Parkway – mechanical treatment  
Capacity: approx. 110,000 t/a
- Viridor Laing/Enpure – anaerobic fermentation  
Capacity: approx. 60,000 t/a

# YOUR JOB IS OUR RESPONSIBILITY



Original parts



Service



Contact



An overview of our service packages:

	Basic	Comfort	Premium
<b>Safety</b>			
Safety review	•	•	•
Safety check	•	•	•
<b>Cost-effectiveness</b>			
Analysis of cost-effectiveness of repair	•	•	•
Travel to and from customer	•	•	•
Storage costs	-	•	•
Guaranteed spare parts prices	-	-	•
Shipping costs of wearing parts	-	-	•
<b>Optimisation</b>			
Information on innovative further development	•	•	•
<b>Availability</b>			
Inspection	•	•	•
Expert condition report	•	•	•
Priority in case of failure	-	•	•
Maintenance (equipment check)	-	•	•
Preventive maintenance (equipment replacement)	-	-	•
<b>Service</b>			
Original parts advice	•	•	•
Technical advice	•	•	•
TeleService (remote maintenance)	-	-	•



## INTERNATIONAL NETWORK ENSURES AN OPTIMUM SERVICE

We create synergies and efficiently link the knowledge and experience of our employees in the interest of our customers and their steadily growing requirements. This means we can guarantee fast and reliable technical support for our customers, even at an international level. We carry a responsibility as a one-stop provider of holistically designed plant solutions – and that does not change after our machines have been delivered.

In addition to consulting, project planning, installation and commissioning, our service package therefore also includes intensive training and a well-structured maintenance and customer service. Furthermore, we offer individual repairs and a quick and reliable spare and wearing parts service. So you can rest assured that when you need us we will be there immediately.

We at VECOPLAN plan, manufacture and install your plant from a single source and our rapid and competent

service is available to you round the clock. Our TeleService reliably reaches any location in the world: plant problems can be diagnosed straight away. Settings can be made, data transmitted and errors rectified via the remote maintenance and remote link modules. In this way, we guarantee professional support and thus the maximum availability of your VECOPLAN technology. Our inspection and maintenance packages safeguard your investment. We offer predefined service packages which, of course, can be amended to meet your individual needs.

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