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At B+B, we build recycling machines for various kinds of plastics, including PET, HDPE, LDPE, PP, PVC, PS, etc. As every type of plastic has their specific properties and the output of the recyclable new ground materials need to meet different demands, the recycling requirements may vary. We not only supply our customers high-quality plants but also help them with support and advice after the lines have been put into operation.

**OUR HISTORY**
For more than 30 years B+B Anlagenbau GmbH has been active in the field of plastic recycling equipment and plant engineering. The company is one of the cornerstones of this innovative and future-orientated industry. We have seen recycling technologies come and go. Today, we offer our customers a wide range of machines and plant components for the reprocessing of all kinds of plastics. In 2009, B+B became part of the Heilig Group. This extension offers our customers financial stability and broad access to the group-wide knowledge in industrial technology leading to further innovations.

**CUSTOM MADE SOLUTIONS**
At B+B, we have been designing, developing, and delivering various machines to wash, separate, dry, and pack plastic flakes, granules, and pellets for over 30 years. Including our engineers at an early stage enables us to offer customized service and optimal recycling and material recovery results. By combining forces with other Heilig Group companies, such as Bezner for pre-selection machines and Beemster for electrical solutions, we design turnkey and state-of-the-art plastic recycling installations.

**EXAMPLE WASHING LINE**
Shredded waste material enters the washing line as contaminated PET flakes and is first conveyed through a friction washer for cold water cleaning of light contaminants such as liquids and paper. The next step is drying the material stream and separating further contaminants, such as dust and sand. This is done in a mechanical dryer. For highly contaminated material, e.g. to remove adhesives from labels, and to meet food grade standards, another washing stage may be required. In a continuous PET hot washer, the flakes are soaked in a mixture of hot water washing solution, followed by a friction washer where the material is rinsed. In a sink-float tank, the PET flakes separation from the lighter plastics such as PE/PP from bottle caps will take place. Lastly, the mechanical dryer will dewater the PET flakes while the polyolefins are dried by a thermal dryer.

**BEST RECYCLING TECHNIQUES**
Optimal recycling means selecting the ultimate installation design and applying high-quality materials, meeting your requirements. At B+B, we have an in-house team of engineers for both mechanical and electrotechnical engineering. We are experienced in PLC programming and project management. Moreover, we have an in-house production facility.

**PRE-SORTING PLASTICS IN WASTE STREAMS**
The most common types of discarded plastics for a profitable recycling installation are PET, HDPE, LDPE, and PVC. The goals are to pre-sort, sort, separate, and recover the plastic materials from a waste stream during a continuous operation and with an absolute minimum of maintenance time before it can be reprocessed as raw material for new products. Our knowledge is extensive, and it is our experience that a suitable solution is a customized solution.

**INNOVATIVE SOLUTIONS RESULT IN HIGH-QUALITY RECYCLED MATERIALS**
The general awareness for a circular economy and specifically regarding the need to recycle plastics, for instance from packing we discard, grows every day.
The key to proper waste management is utilizing the best separation techniques. Plastic recycling is a growing part of waste management. Material Recovery Facilities (MRF) require the most efficient installations to separate plastics from the waste stream and to achieve highest throughput, recovery, and purity rates.

**PET BOTTLE RECYCLING**

Our equipment is used in several processing steps for the cleaning of PET bottles in recycling plants. The scope includes de-balers, de-labelers, and, washing systems which are incorporated for the cleaning of the whole bottles before the grinding process. Optical sorters, grinders, and cleaning machinery further process the PET flakes.

**HDPE – PP RECYCLING**

High-density polyethylene (HDPE) and polypropylene (PP) bottles, containers and thermoformed packaging: quality and conditions of collected HDPE and PP wastes often vary significantly in the plastic waste streams. With our plastic recycling experience of more than 30 years, we challenge ourselves to offer the best possible solutions and provide optimal recovery and material quality results.

**PLASTIC FILM RECYCLING**

Similar to pet bottle recycling, plastic film recycling is one of the most important sources of income of the recycling market. At B+B, we have developed the most optimal techniques for recovery of post consumer film, industrial film, commercial film and agricultural film.
SOLUTIONS WE PROVIDE

PRESORTING SYSTEMS
We build and supply customized waste pre-sorting systems, from standard units to complete turnkey solutions. Our installations include, among others, screens, conveyors, dosing bunkers, silos, hoppers, crushers, eddy current separators, overbelt magnets, optical sorting (NIR), classifiers, and air separators.

SHREDDERS & GRANULATORS
After the washing stage in the recycling process, the plastic bottles are loaded on different conveyor belts to run the waste through the various shredders. These shredders tear up the plastics and prepare them for recycling into other products.

WASHING SYSTEMS
We build friction and hot washers for mixed plastics with a high contamination or persistent dirt, for instance, PET and film flakes. According to your requirements, B+B builds and supplies a variety of washers differing in throughput, driving power, and diameter.

SEPARATION SYSTEMS
For the separation of plastics and wrappers, bottle caps, or contaminant particles such as sand, stones, glass, paper, etc., we have developed technologies for wet material streams. Of course, we offer dry separation systems as well.

DRYING SYSTEMS
An important part of recycling plastics is a dewatering process and subsequent drying process. Our drying systems consist of mechanical dryers, thermal dryers, and step dryers for the following steps in the process, e.g., extrusion.

PACKING SYSTEMS
Our full-automatic Big Bag stations can be supplied with a choice of vibration and distribution mechanism, filling level control, fan to inflate the Big Bag, dust extraction, and integrated weighing scales.
CONVEYOR SYSTEMS

Conveyor systems come in many shapes and sizes. We supply belt conveyors, chain conveyors, plate conveyors, screw conveyors, and elevator conveyors in a wide variety for the material recovery and recycling industries.

PRESORTING MACHINES

B+B innovative presorting solutions can be found in both single machines and turnkey solutions using a variety of separators, sorters, and screens. With our in-house team of mechanical and electrical engineers and production facility, we supply customized systems with a high throughput and excellent recovery and purity rates.

SHREDDERS

Shredders scale down plastics to the appropriate size for further processing or tear up plastic into flakes, preparing them for recycling into other products. The types of plastic material (films, bottles, plastic pipe or other plastic waste) that are being recycled determine the type of shredder.

BIG BAG FILLING STATION

Often used for the collection of flakes or pellets, a big bag filling station offers a perfect material handling unit. B+B supplies automatic bag filling stations for big bags with several options, for instance, weighing scale, dust extraction, and control features.
PRODUCTS

HOT WASHER
Adding this machine to the washing line of plastics such as PET, HDPE, PP/PE, etc., removes contaminants such as adhesives, scrap label remnants, drink and food residues, odor, etc.

FRICITION WASHER
A friction washer is a water-based high-speed cleaning machine for mixed plastics with a high contamination or persistent dirt mostly applied with, for instance, PET and film flakes. Ideally, the friction washer follows both the hot washer as a rinsing unit in the plastic recycling process.

DRY CLEANER
A dry cleaner is a machine designed by B+B that serves the purpose to pre-clean plastics from sand, stones, glass, paper, etc. This method is very sustainable because it requires no addition of water and is low in energy consumption.

SINK-FLOAT TANK
A sink-float tank is ideal for PET bottle recycling. The PET flakes will sink to the bottom while other materials such as plastic wrappers and bottle cap flakes will float. Another application is mixed plastics streams. Rigid PP/PE or film has a lower density making the plastics float while contaminant particles will sink to the bottom to be discarded.
PRODUCTS

ZIG ZAG AIR CLASSIFIER
B+B builds and supplies customized zig-zag air classifiers for two main stages in the recycling process. First, for the separation of films or paper after the dry cleaner and second, for the separation of fines and dust from the ‘end product’.

STEP DRYER
B+B designs and supplies a combination of innovative vertical dewatering equipment and a dry system named step dryer. Contrary to a regular dewatering machine, or plastic sludge dryer, the step dryer is fitted with both a step-shaped basket screen and rotor.

THERMAL DRYER
B+B builds and supplies thermal dryers, by implementing a heat conveying technique. According to your requirements, we can design a thermal dryer fueled by oil or gas, thermal oil, electrically operated, or utilizing hot air from another part of your production process.

MECHANICAL DRYER
The centrifugal force in the mechanical dryer generates a high friction. The stream of dried materials will therefore also be disposed of dust by the basket screens. During the process, the screens will be automatically cleaned.
B+B IS PART OF THE HEILIG GROUP

FROM CONCEPT TO INSTALLATION
ENGINEERING, MANUFACTURING AND INSTALLATION OF RECYCLING AND BULK MATERIAL HANDLING SYSTEMS

EXPLORATION OF OPERATIONS
COAL WASHING PLANTS, DRY BULK PROCESSING PLANTS

ENGINEERING & PRODUCTION
BULK MATERIAL HANDLING AND RECYCLING EQUIPMENT

WASTE MANAGEMENT SOLUTIONS
TURNKEY RECYCLING, WASTE SORTING, MATERIAL RECOVERY AND PROCESSING SYSTEMS

PLASTIC RECYCLING SOLUTIONS
PRESORTING SYSTEMS AND WASHING LINES FOR PLASTIC RECYCLING FACILITIES

ENGINEERING & PRODUCTION
RECYCLING MACHINERY, BULK HANDLING SYSTEMS, WOOD PROCESSING MACHINES AND HEAT EXCHANGERS

PLASTIC RECYCLING SOLUTIONS
PRESORTING SYSTEMS AND WASHING LINES FOR PLASTIC RECYCLING FACILITIES IN NORTH AMERICA

MIXING TECHNOLOGY
INDUSTRIAL MIXERS WITH CAPACITIES UP TO 75,000 LITERS AND SCREW CONVEYORS FOR POWDERS AND PASTES
WORKING TODAY FOR TOMORROW’S WORLD

HEILIG GROUP SOLUTIONS FOR UNIQUE INDUSTRY NEEDS