



VDZZZ1100

The Solution – Combined-shredder-granulator



From bulk to granulate with a single machine

The Revolution for plastic recycler and processors

The VDZ 1100 is the shredder-granulator combination specially designed for shredding input material including lumpy, chunky or bulky material and cork.

The newly developed machine has been jointly designed by the Aachen granulator specialists Heinrich Dreher GmbH & Co. KG and the Westerwald shredding experts Vecoplan AG. The machine combines the expertise of two German machine and equipment engineers under one machine housing. The machine shreds the input material to the desired output grain size in two stages, ready for reuse in the production process.



The Benefits:

- Compact machine design
Shredder and granulator are combined into one machine to form a single compact unit. The machine frame has a thick-walled, ribbed steel construction design.
- High performance drives
The shredder is driven by a 30 or 37 kW, 8-pole electric motor, and the cutting mill by a 15 kW electric motor.
- Hydraulic unit
One aggregate is used for the different functions of the two units. This includes opening the milling part of the grinder as well as moving the ram. The Vecoplan shock valve minimizes efficiently pressure shocks to the hydraulic system, which can occur depending on the application.
- Simple screen change
Both the screen basket of the shredder and the screen section of the granulator are easy and quick to replace from the front.
- Material input
Via a hinged hopper



One Step for efficient plastics reprocessing



Good Reasons, lots of Benefits, durable solution



ESC®-Drive – The benefits at a glance:

- Energy savings up to 25%
- Variable rotor speed optimizes the throughput
- Better efficiency, as turbo coupling and gearbox are redundant
- Low space requirement
- Quiet and dynamic
- Safe tramp material recognition



- No conveying technology between shredder and cutting mill
- Easier and cheaper integration in sound enclosures
- 70% space saving by combining shredder and granulator
- One controller for the complete system



- Fewer assemblies by combining shredder and granulator
- Very short maintenance times thanks to easy access
- Very easy to clean when replacing components
- Very easy to set the cutting gap
- High quality components, especially the rotor bearing



- Lower connected load and power consumption compared to two-step shredding with conveyor belt
- The combined unit saves operating staff



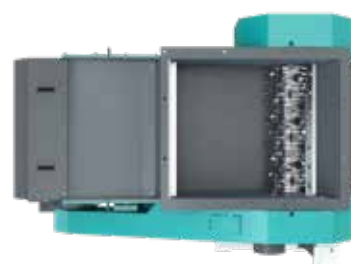
- Low noise emissions thanks to stable design, and simplified noise protection measures possible
- Safe, simple maintenance access
- Quiet running
- State-of-the-art confirmation prompts
- Performance level D2

Technical data

The VDZ 1100 performs two shredding steps (pre-shredding and milling) in one machine. This complete solution means conveyor belts and steel structures are redundant and process reliability is elevated thanks to fewer assemblies.

The space and cost-saving compact design of the VDZ 1100 enables the flexible positioning of the machine in existing systems. The extremely robust design and patented drive belt technology of the ESC-Drive result in an energy-efficient, high performance and durable shredder-granulator combination that offers optimum milling results and quality.

Details			VDZ 1100
Intake length		mm	1,300
Intake width		mm	1,075
Shredder rotor diameter		mm	370
Granulator rotor diameter		mm	260
Granulator working width		mm	820
Throughput rate approx.		kg/h	up to 1,500*
Shredder drive power		kW	30 or 37
Granulator drive power		kW	15
Knife	Schredder	Qty	24 or 48 cutting crowns
	Mill	Qty	5 rows of knives in rotor, 2 rows of knives in stator



*Depending on the input material and screen variants. Subject to technical changes / Detailed dimensional drawings and load data available on request.

As at: 06/2018

VDZ 1100 – the solution



Compact machine design

Shredder and granulator are combined into one machine frame to form a single compact unit. The machine housing has a thick-walled, ribbed steel construction design. The machine base frame is an integrated part of the machine.



Easy access to shredder screen compartment

Maintenance door enables easy and direct access to the single-shaft shredder and to the shredding mill via a large front door.



Moveable rotor and screen

The granulator rotor and screen can be swung down automatically. This is done by a hydraulic cylinder directly connected to the central hydraulic unit.



Easy screen change

Both the screen basket of the shredder and screen of the granulator can be easily and quickly replaced from the front.



Safety features

The machine has various safety features. The opening of the front door, which is the central access to the cutting compartment, is safeguarded by a two-channel safety switch.





High performance drive

Shredder drive unit with three-phase motor, nominal speed 185 rpm, speed range 90–265 rpm, the rotor is directly connected to the frequency-controlled motor via a drive belt. Granulator drive unit with 610 rpm rotor three-phase motor. Three-phase motors with PTC thermistor technology.



Belt tension maintenance

Easy access to the belt for checking the belt tension by means of ergonomic maintenance flaps.



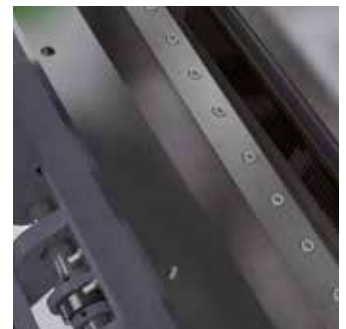
Shredder features

Cutting unit with large rotor diameter, consisting of a steel rotor fitted with hardened concave cutting tools (which can be used and changed four times thanks to the V-shaped centering groove) and a sturdy counter-knife bar.



granulator features

Durable, balanced rotor with high cutting power and minimum cutting gap, which can be adjusted by the stator knife (cutting gap adjustable to <math><0.1\text{ mm}</math>). Quick check of the cutting gap possible in the machine. Optimum cutting gap guarantees optimum bulk density and quality of the milled material.



Hydraulic unit

One aggregate is used for the different functions of the two units. This includes opening the milling part of the grinder as well as moving the ram. The Vecoplan shock valve minimizes efficiently pressure shocks to the hydraulic system, which can occur depending on the application.



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