

**Doppstadt**

# **INVENTHOR**

**SLOW SPEED SHREDDER LINE**



**BEST SOLUTION. SMART RECYCLING.**

## **BREAKS UP MORE. TAKES IN MORE.**

With the INVENTHOR series from Doppstadt, you are able to cover a wide range of applications and materials. The machines of the Slow Speed Shredder Line use a high torque to reliably pre-shred the materials. You profit from an effective drive train with great power reserves, an intelligent material feed and configurable shredding systems.



### **VARIABLE POWER TRANSMISSION.**

The INVENTHOR is based on Doppstadt's proven single-shaft principle. The highlight of the series is our patented VarioDirect Drive, which is installed as standard. The unique direct drive concept variably transfers the power to the shredding shaft and thus offers completely new options for effective shredding. By doing so, the shaft speed can be flexibly adapted to different shredding tasks, while the engine is highly efficient at delivering a high level of performance at a constant speed. The machine concept with the comb flap, which can be extended considerably, is designed in such a way that you can rely on a quick uptime after changing tools or completing service work.

### **FLEXIBLE USE.**

Every machine of the Slow Speed Shredder Line is a mobile shredder that can be used flexibly and cost-effectively for a wide range of applications. Thanks to their high efficiency, you can count on a quick return on investment. The INVENTHOR is able to handle a broad spectrum of applications in the area of pre-shredding thanks to its configurable shredding system with easy-to-replace tooth sizes.



### **SMART SHREDDING WITH INVENTHOR.**

#### **RUGGED SYSTEMS.**

All machines of the INVENTHOR series shred efficiently and reliably. They are self-protecting, resistant to contaminations, easy-to-use and easily accessible. That minimizes your maintenance expenses and, above all, the time that your system is down.

#### **PROFITABLE RESULTS.**

The high throughput speeds up the flow of materials so that you are able to complete your jobs quickly.

*The INVENTHOR 9  
e.g., with green waste*



## ***THE INVENTHOR REDEFINES EFFICIENCY.***

- Great flexibility thanks to freely selectable shredding systems
- Outstanding throughput even with demanding applications
- Continuous monitoring of the shredding process
- High power reserve with low fuel consumption and reduced noise emissions
- Quick uptime after maintenance and high on-the-job safety

## MACHINE DETAILS



### **FLEXIBLE DISCHARGE HEIGHT**

Whether on a pile, in another machine or in a container, the flexible discharge system allows precise adjustment of both the discharge height and discharge speed. The different rear belt lengths of 4.9 m, 7 m and 8.5 m (Inventhor 9) are easily swap thanks to the central DoppHitch mount.



### **ADJUSTABLE SHREDDING RESULT**

Respond easily to changing requirements. Define both the cutting gap and comb pressure by the push of a button and influence your shredding result.



### **EASY ACCESS**

The entire shredding area is easy to access thanks to the wide-opening comb flap. That increases on-the-job safety and improves machine availability even after service work.



### **EASY ACCESSIBILITY**

The lightweight GRP doors open upwards so that you always have easy access to all sides. With the Inventhor 6.2, you also have the option of folding up the GRP roof using the feed hopper to further improve accessibility.



### **RELIABLE FE-METAL REMOVAL**

Equip your machine with an optional overbelt magnet to reliably remove FE metals. Maximise the yield with a stronger 2 tonne magnet or with a magnetic head pulley.



**EXTENDED FEED AREA**

The INVENTHOR holds large amounts of material. You can operate the feed hopper of the INVENTHOR 6.2 by the push of a button so that material is fed into the machine gradually.



**BLOCKAGE-FREE DISCHARGE**

No interruptions due to the time-consuming clearing of blockages under the shaft. Thanks to sufficient space between the shaft and lower belt as well as the magnetic belt, which can automatically retract in the event of blockages.



**INTUITIVE OPERATION**

At the touch of a button on the control panel, programmes can be set up with all the necessary parameters according to your requirements. If you are sitting on the loading vehicle, you can control the Inventhor conveniently using the remote control with display, so that you also receive active feedback on the machine behaviour from here.



**ELECTRIC DRIVE OPTION**

The Inventhor 6.2 is available with a 315 kW three-phase motor, allowing you to benefit from lower energy and maintenance costs. All necessary modules such as the switch cabinet and frequency converter are built into the machine so that you can connect the Inventhor 6.2 "plug and play" to your existing infrastructure.



**SHORT DOWNTIMES**

The shredding tools are attached to the shaft with our patented Dopp-Lock® quick-change system and can be changed in no time at all. The bolted comb teeth can be changed at the same time using the comb bar. For even better machine availability, we recommend a second comb bar for alternate use.

## ***YOU ALWAYS HAVE ENOUGH POWER.***

The series is equipped with powerful diesel engines from MTU, CAT or ABB. In INVENTHOR 6.2, you have 260 kW (MTU) at your disposal, while the INVENTHOR 6.2 Plus delivers 310 kW (CAT) or a 315 kW three-phase motor (ABB). The flagship INVENTHOR 9 is powered by 390 kW (MTU).

All engines comply with the EU Stage V emission standard. The CAT engine is also available in the Euromot IIIA emissions standard.



### ***INTELLIGENT HYDRAULICS.***

The load sensing system adapts the volume flow of the pumps exactly to the required performance. The system only provides as much hydraulic oil as the machine needs. This precisely metered oil flow reduces your fuel consumption considerably.

Other advantages that you benefit from during use: The system also ensures a constant belt speed even if the engine speed fluctuates. The auxiliary hydraulic system always works reliably thanks to the constant volume flow. The full functionality of the hydraulic system can also be leveraged at idle.

### ***STEPLESSLY ADJUSTABLE REAR BELTS UP TO 8.5 M.***

Be it mounted on a semi-trailer, central-axle chassis or track-laying chassis, you can equip the INVENTHOR with rear belts that precisely match your requirements. The INVENTHOR 6.2 and 6.2 Plus can be equipped with belts having a length of 4.9 m and 7.0 m, while the INVENTHOR 9 can be outfitted with belts between 4.8 m, 7.0 m and 8.5 m.

All rear belts are adjustable steplessly in height and variably in speed. In addition to that, they include pressure monitoring, which interrupts the shredding process in the event of a malfunction or operational incident.





**Doppstadt**

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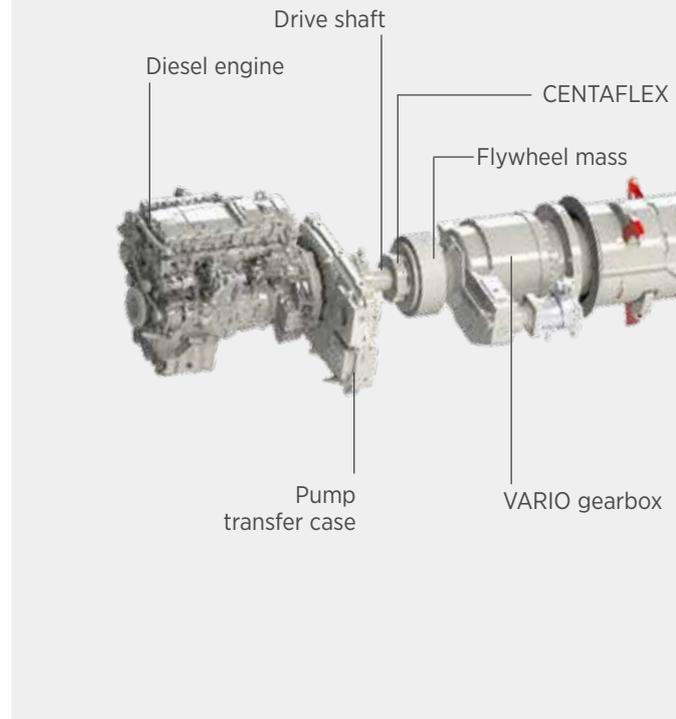
**INVENTHOR 9**

Slow Speed Shredder Line

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## ITS THROUGHPUT IS WITHOUT RIVAL.

In addition to the revolutionary VarioDirect Drive and the efficient shredding system, the INVENTHOR combines a number of additional high-performance components that transform the machine into a top-class mobile shredder. The interaction of these individual components allows you to achieve new levels of throughput in your company.

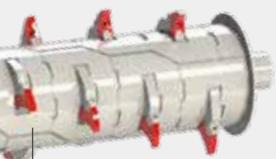


### SHREDDER PACKAGES

	INVENTHOR 9			INVENTHOR 6.2 / INVENTHOR 6.2 PLUS		
	SIZE XL	SIZE L	SIZE M	SIZE L 27 teeth	SIZE L	SIZE M
Engine variation	MTU 390 kW	MTU 390 kW	MTU 390 kW	CAT 310 kW / MTU 260 kW	CAT 310 kW / MTU 260 kW	CAT 310 kW / MTU 260 kW
<b>DIMENSIONS</b>						
Diameter	600 mm	600 mm	800 mm	600 mm	600 mm	800 mm
Number of teeth	28	21 or 42	100	27	30 (CAT) / 20	72
Teeth depth	170 mm	174 mm	100 mm	174 mm	174 mm	100 mm
Drum length	3.0 m	3.0 m	3.0 m	2.2 m	2.2 m	2.2 m
<b>TYPE</b>						
Limiter	13 x Limiter XL 600 (15 comb teeth)	20 x Limiter L 600 (20 comb teeth)	24 x Limiter M 800 (2 comb plates)	7 x Limiter L 600 (14 comb teeth)	7 x Limiter L 600 (14 comb teeth)	9 x Limiter M 800 (2 comb plates)
<b>BENEFIT</b>						
Applications	Heavy waste/ waste wood	Green waste / waste wood / waste/roots	Waste wood/ limited oversize waste	Green waste	Green waste / waste wood / waste/ roots	Waste wood/ limited special materials

Limiter system with oversize return available for all types of teeth  
Limiter use in waste wood, only partially possible in other materials

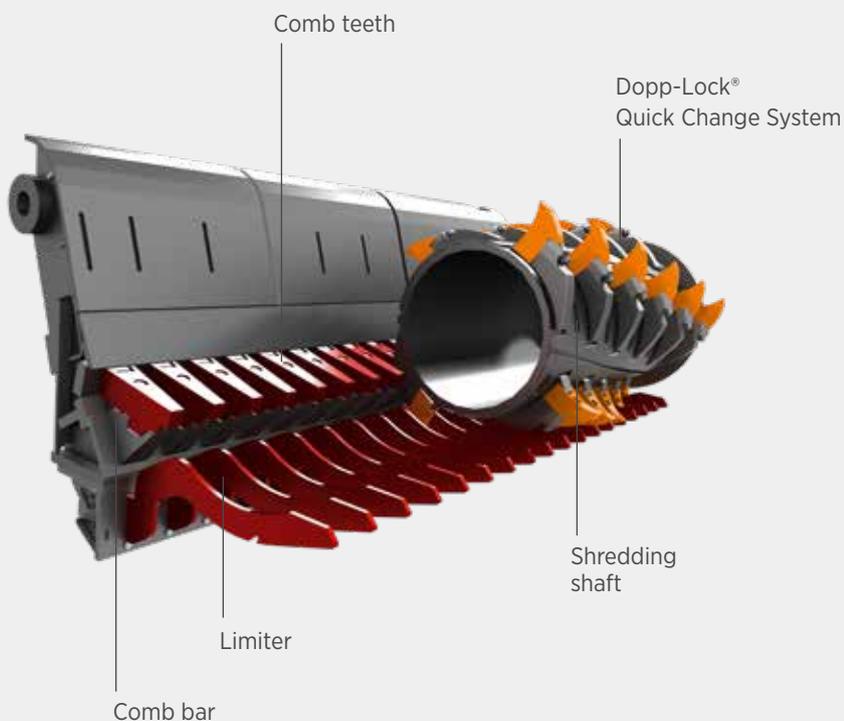
coupling



Shredding shaft

## ***PATENTED VARIODIRECT DRIVE.***

- The drive impresses with its high efficiency, optimum torque and low fuel consumption.
- With a constant engine speed, the shaft speed can be flexibly adjusted to ensure that the machine adapts to the shredding task.
- Starting under load is thus no problem.
- The shaft can also be reversed during operation.
- In case of overload, automatic mode is disabled in order to protect the machine from any damage.
- Shredding stops promptly in the event of any problems.
- Thanks to the gearbox, you can program and save individual operating programs.



## ***QUICK TOOL CHANGE.***

Thanks to the patented Dopp-Lock®, the teeth of the shredding shaft can be changed quickly. To do so, you can turn the shaft hydraulically.

The comb bar is completely removable. If a second comb bar is used, you can equip it beforehand with new comb teeth in your workshop. The Limiter is simply inserted into the suspension. All in all, these features significantly reduce your changeover times.

## **VERSATILITY REDEFINED WITH DOPPBASKET.**

The DoppBasket system enables even more versatile and efficient use of your Inventhor 6.2.

With the use of a screen basket, a variety of different materials can be shredded to a defined target grain size in just one processing step. If requirements change, the screen basket can be changed in a short time or you can simply continue working without the basket.

**COMB BASKET**



- Shredding without unwanted oversizes
- Recommended applications: waste, green waste
- Special applications: mattresses, tires, carpets, nets, plastic pipes

**HEXAGON BASKET**



- Shredding to defined grain size
- Various mesh sizes available
- Recommended applications: waste, green waste, plastics

**3D - BASKET**



- Shredding to defined grain size
- Optimized for waste wood
- Various mesh sizes available
- Recommended application: waste wood

## **SHREDDING WITH DOPPBASKET.**

- Shredding of material to a defined target grain size in just one processing step
- Quick adaptation to changing requirements - Simple removal and assembly of the screen basket
- Self-protecting basket system - No fear of contaminants thanks to movable basket that opens if necessary
- High Durability - The screen baskets are made of wear-resistant steel with high thicknesses
- Future-proof - Can be retrofitted to existing machines



### SMART COMBINATION.

For demanding shredding tasks, you can very effectively combine the INVENTHOR with rugged separation solutions, such as the Selector 800.2. Doing so allows you to separate materials that are difficult to screen, such as waste wood or biomass, right after the shredding process. And you can produce a finished product in just one step.

### PERFORMANCE PARAMETERS.

- 2 Average material streams up to 60,000 m. ton/yr
- 3 Large material streams up to 90,000 m. ton/yr



### SLOW SPEED SHREDDER LINE



- 2 **INVENTHOR 6.2**  
The shredder that redefines operating efficiency.

- 2 **INVENTHOR 6.2 PLUS**  
The shredder with the great power reserves.



- 3 **INVENTHOR 9**  
The shredder for really major jobs.



*“Our Inventhor series combines the best shredding technology from its predecessor, the renowned “Büffel” DW 3060, which has proven itself for decades, with the intelligent VarioDirect Drive concept. The separate setting of shaft and engine speed increases efficiency and possibilities by helping you to flexibly adapt the machine to your requirements.”*

*(Dominik Niehaus,  
Product manager, Doppstadt)*



<b>INVENTHOR 6.2</b>	<b>3-AXLE TRAILER</b>	<b>SEMI-TRAILER</b>	<b>TRACK-LAYING CHASSIS</b>
Chassis	Central axle trailer chassis for 80 km/h, as per StVZO (Road Traffic Licensing Regulations), with ABS brake system	Semi-trailer chassis for 80 km/h, as per StVZO (Road Traffic Licensing Regulations), with ABS brake system	Track-laying chassis for self-propelled drive, two travel speeds
Overall weight	25,000 kg (depending on equipment configuration)	27,000 kg (depending on equipment configuration)	27,000 kg (depending on equipment configuration)

#### **WORKING POSITION**

Length 1 / 2	12.947 mm / 14.766 mm	11.516 mm / 13.314 mm	11.516 mm / 13.335 mm
Width	2.540 mm	2.540 mm	2.500 mm
Height	3.650 mm	3.650 mm	3.967 mm

#### **TRANSPORT DIMENSIONS**

Length	9.068 mm	7.636 mm	7.636 mm
Width	2.540 mm	2.540 mm	2.500 mm
Height	3.650 mm	3.650 mm	3.378 mm

#### **DRIVE**

Engine type	Diesel hydraulic	Diesel hydraulic	Electro-hydraulic	Diesel hydraulic	Electro-hydraulic
Tank capacity	425 L	425 L		425 L	

#### **INVENTHOR 6.2**

Nominal output	260 kW (354 HP) at 1700 rpm	260 kW (354 HP) at 1700 rpm	260 kW (354 HP) at 1700 rpm
Emission standard	Stage V	Stage V	Stage V
Cubic capacity	7.700 cm <sup>3</sup>	7.700 cm <sup>3</sup>	7.700 cm <sup>3</sup>
Make	MTU 6R1000 Daimler OM 936*	MTU 6R1000 Daimler OM 936*	MTU 6R1000 Daimler OM 936*

#### **INVENTHOR 6.2 PLUS**

Nominal output	310 kW (421 HP) at 1800 rpm	310 kW (421 HP) at 1800 rpm	315 kW (428 HP) at 1.800 rpm	310 kW (421 HP) at 1800 rpm	315 kW (428 HP) at 1.800 rpm
Emission standard / Energy-efficiency class	Stage V or EUROMOT IIIA	Stage V or EUROMOT IIIA	IE3	Stage V or EUROMOT IIIA	IE3
Cubic capacity / Operating mode	9.300 cm <sup>3</sup>	9.300 cm <sup>3</sup>	Frequency converter	9.300 cm <sup>3</sup>	Frequency converter
Make	CAT C9.3B	CAT C9.3B		CAT C9.3B	

#### **LOADING**

Loading height with hopper extension	3.650 mm	3.650 mm	3.378 mm
Loading height without hopper extension	3.194 mm	3.194 mm	2.922 mm
Loading width	3.374 mm	3.374 mm	3.374 mm

#### **SHAFT**

Drum length	2.200 mm	2.200 mm	2.200 mm
Diameter	600/800 mm	600/800 mm	600/800 mm
Speed	-2 to 30 rpm	-2 to 30 rpm	-2 to 30 rpm

#### **CONVEYOR BELT**

Width lower belt	800 mm	800 mm	800 mm
Length lower belt	2.900 mm	2.900 mm	2.900 mm
Conveying speed lower conveyor	1,3 to 2,9 m/s	1,3 to 2,9 m/s	1,3 to 2,9 m/s
Width rear belt	1,000 mm	1,000 mm	1,000 mm
Length rear belt 1 / 2	4.900 mm / 7.000 mm	4.900 mm / 7.000 mm	4.900 mm / 7.000 mm
Conveying speed rear belt	1,25 to 3,0 m/s	1,25 to 3,0 m/s	1,25 to 3,0 m/s
Discharge height rear belt 1 / 2	3.159 mm / 4.209 mm	3.159 mm / 4.209 mm	2.887 mm / 3.937 mm

#### **OTHER**

Optional equipment	"Limiter" oversize return, shredder packages of size M, L, hydraulic drive, rear belt length 7 m, overbelt magnet, auxiliary hopper attachment panels, hopper wedge, misting system, winter package, LED light package	"Limiter" oversize return, shredder packages of size M, L, hydraulic drive, rear belt length 7 m, overbelt magnet, auxiliary hopper attachment panels, hopper wedge, misting system, winter package, LED light package	"Limiter" oversize return, shredder packages of size M, L, rear belt length 7 m, overbelt magnet, auxiliary hopper attachment panels, hopper wedge, misting system, winter package, LED light package
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<b>INVENTHOR 9</b>	<b>SEMI-TRAILER</b>	<b>TRACK-LAYING CHASSIS</b>
Chassis	Semi-trailer chassis for 80 km/h, as per StVZO, with ABS brake system	Track-laying chassis for self-propelled drive, Two travel speeds
Overall weight	32,000 kg	35,000 kg
<b>WORKING POSITION</b>		
Length	16,786 mm	16,786 mm
Width	2,500 mm	3,000 mm
Height	5,050 mm	4,890 mm
<b>TRANSPORT DIMENSIONS</b>		
Length	9,971 mm	9,813 mm
Width	2,500 mm	3,000 mm
Height	3,893 mm	3,685 mm
<b>DRIVE</b>		
Engine type	Diesel hydraulic	Diesel hydraulic
Make	MTU 6R1300*	MTU 6R1300*
Nominal output	390 kW (530 HP) at 1600 rpm	390 kW (530 HP) at 1600 rpm
Emission standard	Stage V or EUROMOT IIIA	Stage V or EUROMOT IIIA
Tank capacity	950 L	950 L
Cubic capacity	11,970 cm <sup>3</sup>	11,970 cm <sup>3</sup>
<b>SHAFT</b>		
Drum length	3,000 mm	3,000 mm
Diameter	600 / 800 mm	600 / 800 mm
Speed	-5 to 32 rpm	-5 to 32 rpm
<b>CONVEYOR BELT</b>		
Width lower belt	1,000 mm	1,000 mm
Length lower belt	4,450 mm	4,450 mm
Conveying speed lower conveyor	1.3 to 2.9 m/s	1.3 to 2.9 m/s
Width rear belt	1,200 mm	1,200 mm
Length rear belt	8,500 mm	8,500 mm
Conveying speed rear belt	up to 2.0 m/s	up to 2.0 m/s
Discharge height rear belt	5,050 mm	4,890 mm
<b>OTHER</b>		
Optional equipment	"Limiter" oversize return, shredder packages of size M, S or XL, hydraulic drive, overbelt magnet, feed hopper, hopper attachment panels, misting system, winter package, LED light package	"Limiter" oversize return, shredder packages of size M, S or XL, rear belt length 7 m, overbelt magnet, feed hopper, hopper attachment panels, misting system, winter package, LED light package

\* MTU engines are based on Mercedes-Benz's proven engine technology.

## **BEST SOLUTION. SMART RECYCLING.**

Our innovative solutions have made us a leading supplier and manufacturer of processing technology. Customers in the waste disposal and recycling industry all over the world trust our expertise and benefit from our qualified service every day.

We are always there – whenever you need us. We can train your team at the Doppstadt Academy (online and offline) so that you can fully exploit the performance potential of the machines and make your operations even more productive. Added to this are worldwide security of supply, fast on-site repair service and all-round carefree packages within service and maintenance contracts.

Because “a machine is only as good as the service behind it.” (Werner Doppstadt)



**Doppstadt**  
Academy

