

**Doppstadt**

# **INVENTHOR**

**TYPE 6**

SLOW SPEED SHREDDER LINE



**Best Solution. Smart Recycling.**

[stevensgroup.co.nz](http://stevensgroup.co.nz)



# INVENTHOR TYPE 6

## Redefining efficiency.

The Inventhor Type 6 sets standards in terms of shredding efficiency. The new addition to the slow speed shredder line fits perfectly with Doppstadt's "Smart Solutions" concept. It impresses in every aspect as a mobile, modular machine that can be used cost-effectively and flexibly in a wide variety of applications. And thanks to its great efficiency, it distinguishes itself with a fast return on investment.

### EXTENDING OUR LEAD

The Inventhor Type 6 combines the best of both worlds. It is technologically based on the latest generation of shredders from Doppstadt. At the same time, it consistently continues the success of its predecessor, DW 3060. The entire machine concept is geared to:

- **higher efficiency**
- **ease of use**
- **good accessibility**
- **increased uptime**

For instance, it includes an improved cooling system, a maintenance-optimized engine compartment, an intelligent material feed, a well-designed shredding compartment and an effective material discharge.

### SHREDDING WITHOUT COMPROMISE

The unique and variable direct drive concept, the VarioDirect Drive forms the core technology. It leverages Doppstadt's patented phase shifter gearbox. By continuously transferring torque to the shredding system, it ensures high production, low fuel consumption and optimum starting

performance, even when handling difficult shredding jobs!

The Inventhor Type 6 is able to handle a wide range of applications thanks to its flexible shredding system with different tooth sizes.

The whole shredding concept is designed for high uptime of the machine, easy and fast maintenance or service work while offering improved safety. One example for the outstanding accessibility is the comb door which can be opened up to 90°.

### ENSURING YOUR SYSTEM RUNS SMOOTHLY!

The SLOW SPEED SHREDDER LINE includes all shredders that pre-shred and work at low speeds and high torque. All of these machines are consistently tailored to meet your requirements. And the result of our many years of expertise in successfully delivering high-quality and forward-looking technology.

That is why the Inventhor Type 6 takes the next important step compared to other machines. The effective drive train, the optimized material feed and shredding system including an excellent monitoring concept and production performance capacity even during demanding appli-

cations make the Inventhor Type 6 a highly efficient future-proof machine for almost every area of application that is able to handle a wide range of materials.

## THIS IS DOPPSTADT.

The family owned business Doppstadt with headquarters in Velbert, Germany, was founded in 1965. While the company focused in the beginning on the development of agricultural machinery, Doppstadt is now a leading internationally active solution and full-service provider in all areas of environmental technology and recycling. "Best Solution. Smart Recycling." – in line with this slogan, we combine proven processes to create complete individual solutions that are distinguished by innovative process operations, maximum efficiency and optimum economic viability. Especially in the fields of water-based separation systems and wet recycling, we impress our customers with our flexible systems designed to handle every challenge. From our locations in Velbert, Wülfrath, Calbe and Wilsdruff, we serve customers in more than 40 countries with our own network of authorized dealers, offering comprehensive services that cater to Doppstadt's unique portfolio.

# MACHINE DETAILS



## COOLING SYSTEM DESIGN

Highly efficient cooling system geometry, directly upstream of hydraulic, reversible fan.



## PLUG & PLAY

Simple operating concept makes daily routine tasks easy with the press of a button using different programs.



## ENGINE COMPARTMENT

The engine compartment offers lots of space and easy access to all components, such as engine equipment, transfer case with direct engine connection or to the load-sensing system.



## SMART HOPPER

Extended feed area and automatic adjustment of material feed to increase the production of the shredding system.



## MATERIAL FEED AND SHREDDING CHAMBER

The steep walls of the feed hopper ensure continuous production. The flexible shredding concept with different shaft configurations allows a precise adaptation to different material requirements.



## VARIODIRECT DRIVE

The newly developed and patented Vario-Direct Drive delivers steplessly variable power directly to the shredding shaft.



## REAR BELT OPTIONS

The central DoppHitch attachment system makes it easy to utilize different rear-mounted system solutions. Selectable belt length options offer high discharge heights and steplessly adjustable belt angles.



## INNOVATIVE DOOR CONCEPT

All door panels open upwards ensuring optimum access. The GRP door panels with their large air vents ensure optimal ventilation, while reducing noise emissions at the same time.



## EASY ACCESS CONCEPT

The counter comb door which opens up to 90° greatly ensures easy access to the entire shredding compartment. It also increases on-the-job safety and ensures a fast re-start after service work.



## MULTI TOOL CONCEPT

Use of shredding tools equipped with Dopp-Lock® system from other slow speed shredders, available in sizes M and L including the new generation of limiters.

## OPTIONAL CHASSIS

The Inventhor Type 6 is available on a trailer or semi-trailer chassis with hydraulic self-propelled drive, or on a remote-controlled track-mounted chassis.





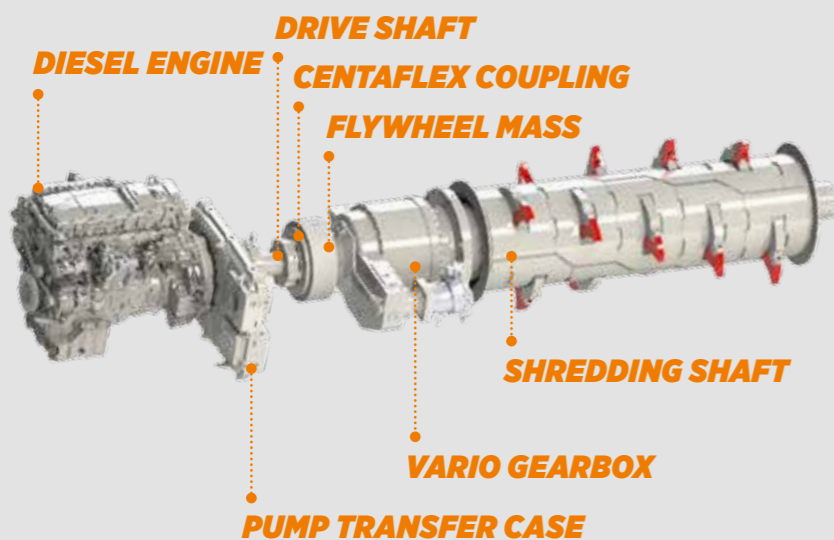
## VARIODIRECT DRIVE

### Getting down to business.

The patented direct drive handles literally all shredding jobs. The flexible VarioDirect Drive runs precisely even under the most difficult conditions with high power requirements.

#### NEW STANDARDS IN TERMS OF DRIVE

The VarioDirect Drive variably and continuously transmits torque to the shredding shaft, thus enabling entirely new, effective shredding. It impresses with its new reversing performance while loaded, with different speeds adapted to the material, which can be set with optimum torque independently of the diesel engine rpm, and the integration of different material-specific operating programs. This forward-looking drive concept thus provides all the functions of a hydraulic drive train while retaining the direct drive concept with its high efficiency, for which Doppstadt is well-known.



#### OVERVIEW OF KEY ADVANTAGES:

##### FLEXIBLE:

The shaft's direction of rotation can be reversed, even while working.

##### INTELLIGENT:

Automatic mode is disabled in case of overload.

##### ADAPTABLE:

The gearbox ensures a flexible speed range for the shredding shaft, regardless of the main drive.

##### SAFE:

Shredding stops promptly in the event of any problems.

##### READY TO GO:

The efficiency of directly driven shaft ensures higher efficiency compared to hydraulically driven shredding systems. In addition to that, the gearbox allows for re-start even under load.

##### ADJUSTABLE:

The gearbox enables the integration of various operating programs for different applications.

## THE SHREDDING CONCEPT

### Making short work of difficult jobs.

The Inventhor Type 6 is suited for shredding:

- waste wood
- green waste
- roots, stumps and logs
- construction and demolition waste
- commercial and industrial waste
- municipal solid waste

In order to successfully handle so many different tasks, we have further developed the advantages and technical characteristics of the DW series' proven shredding concept.

**Shredding compartment:** The feed hopper walls are steeper in relation to the shaft, ensuring that material can better enter the process. The space between the shredding shaft and under belt has been increased. The result: Improved discharge, better accessibility.

**Comb bar:** The wide-opening counter comb door makes it easy to access the shredding compartment and thus take out the entire comb bar. This ensures that all comb teeth can be replaced all at once. It also increases on-the-job safety and a fast re-start of the machine after completion of service work.

**Limiter system & tools:** Shredding tools and limiters can be replaced in a very short period of time. The wear part is separate from the suspension in the limiters' fastening concept.

**Shredding shaft:** The shaft can be rotated hydraulically to provide an optimal and easy tool replacement.





## ***INSIDE INVENTHOR TYPE 6*** **Packed with advantages to the minutest detail.**

The hydraulically driven **cooling system** automatically regulates the fan's speed in relation to the temperature. In addition, the large front hinged door ensures optimum access and makes the cooling system extremely easy to maintain.

The **further developed engine compartment** also ease maintenance and service work. Doors that are designed using lightweight GRP and which open upwards ensure optimum access to the entire engine compartment from both sides.

Depending on your requirements, you can choose between an **MTU engine with 354 hp** or a **more powerful Caterpillar engine with 421 hp**. These not only meet

the latest stage V emissions standard, but the CAT engine is also available in the Tier IVf and Euromot IIIA emissions standards.

The **optimized transfer case** provides several drives for the hydraulic pumps. The direct engine connection ensures that power is ideally transferred both to the connected hydraulic pumps and to the maintenance-friendly transfer case.

The ingenious **load-sensing system** ensures that the volume flow from the hydraulic pump is adapted to the required performance. This precisely metered flow of oil also reduces fuel consumption, since the machine only gets as much oil as it needs. The full functionality of the

hydraulic system can be leveraged at idle as well. The system also ensures a constant belt speed even when the engine speed fluctuates, while the auxiliary hydraulic system is reliably working thanks to the continuous volume flow being provided. Depending on job requirements, there are **several rear belt options** that are available. All versions (belt lengths 4.9 m and 7 m – both for semi-trailer and track-mounted chassis) can be adjusted steplessly in terms of height and speed. All belts are also equipped with a pressure monitoring system that can stop the shredding process when necessary.

The **simple operating concept** relies on a convenient and reliable 18-channel wireless remote control. In other words: The

interaction of these individual components allows for achieving new levels of throughput and efficiency.

That makes the Inventhor Type 6 a first-class mobile shredder.

**Made by Doppstadt, made in Germany!**



***RECYCLING WITHOUT ANY DISTURBANCES.***

The Inventhor Type 6 can be optimally combined as part of more complex shredding systems with rugged separation solutions like Doppstadt's Selector 800 with SWS 800 spiral shaft screening deck. Doing so allows you to effectively and efficiently separate materials right after the shredding process, e.g., of waste wood or biomass and generate a finished product practically in one step or line.

# TECHNICAL SPECIFICATIONS

## INVENTHOR TYPE 6 3-AXLE TRAILER CHASSIS SEMI-TRAILER CHASSIS TRACK-MOUNTED CHASSIS



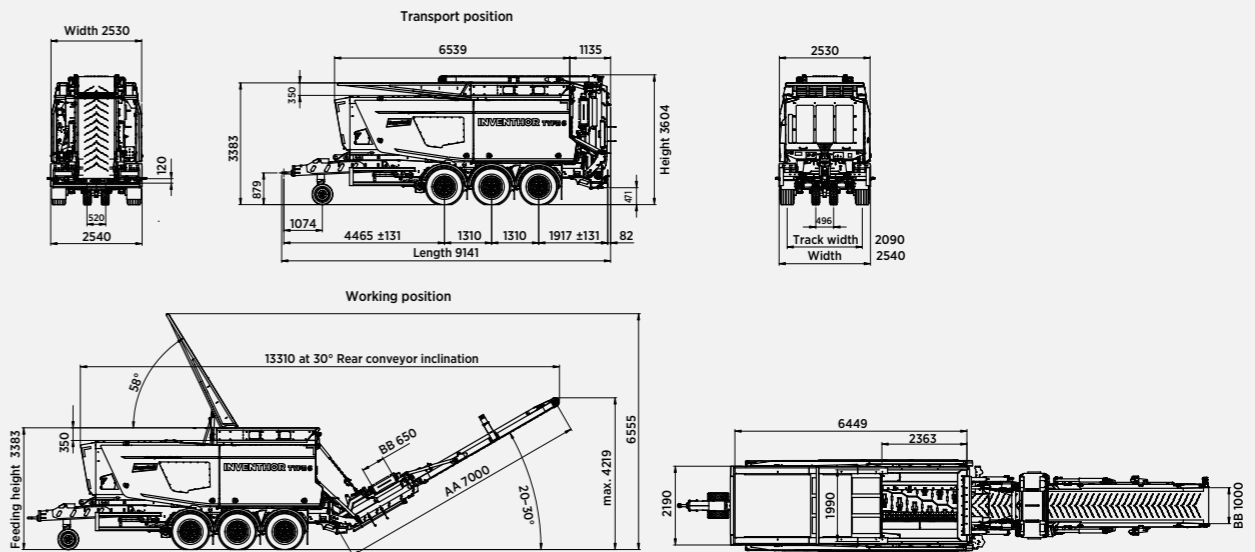
Overall weight	25,000 kg (depending on equipment configuration)		25,000 kg (depending on equipment configuration)		25,000 kg (depending on equipment configuration)	
Chassis	Central axle trailer chassis for 80 km/h, as per StVZO (Road Traffic Licensing Regulations), with ABS brake system		Semi-trailer chassis for 80 km/h, as per StVZO (Road Traffic Licensing Regulations), with ABS brake system		Track-mounted chassis for self-propelled drive, Two travel speeds	
Drive	Diesel engine		Diesel engine		Diesel engine	
<b>Motor-Type: 1</b>	CAT C9.3B		CAT C9.3B		CAT C9.3B	
Nominal output	310 kW (421 HP) at 1,800 rpm		310 kW (421 HP) at 1,800 rpm		310 kW (421 HP) at 1,800 rpm	
Emission standard	STAGE V / Tier IVf / EUROMOT IIIA		STAGE V / Tier IVf / EUROMOT IIIA		STAGE V / Tier IVf / EUROMOT IIIA	
Cubic capacity	9.300 cm <sup>3</sup>		9.300 cm <sup>3</sup>		9.300 cm <sup>3</sup>	
<b>Motor-Type: 2</b>	MTU 6R1000 Daimler OM 936*		MTU 6R1000 Daimler OM 936*		MTU 6R1000 Daimler OM 936*	
Nominal output	260 kW (354 HP) at 1,700 rpm		260 kW (354 HP) at 1,700 rpm		260 kW (354 HP) at 1,700 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>	
Tank capacity	500 L		500 L		500 L	
Shaft/drum length	2,200 mm		2,200 mm		2,200 mm	
Shaft diameter	600/800 mm		600/800 mm		600/800 mm	
Shaft speed	-2 to 28 rpm		-2 to 28 rpm		-2 to 28 rpm	
Conveyor belt	Under belt	Rear belt	Under belt	Rear belt	Under belt	Rear belt
Width	800 mm	1,000 mm	800 mm	1,000 mm	800 mm	1,000 mm
Length	2,900 mm	4,900 mm/optional 7,000 mm	2,900 mm	4,900 mm/optional 7,000 mm	2,900 mm	4,900 mm/optional 7,000 mm
Discharge height		3,162 mm/4,219 mm		3,162 mm/4,219 mm		2,917 mm/3,967 mm
Conveying speed	1.3 to 2.9 m/s	1.25 to 3.0 m/s	1.3 to 2.9 m/s	1.25 to 3.0 m/s	1.3 to 2.9 m/s	1.25 to 3.0 m/s
Optional equipment	Oversize reduction "Limiter", shredder packages of size S, M, L or XL, hydraulic self-propelled drive, rear belt length 7 m, overbelt magnet, auxiliary hopper attachment panels, hopper wedge, water spraying system, winter package, LED light package		Oversize reduction "Limiter", shredder packages of size S, M, L or XL, hydraulic self-propelled drive, rear belt length 7 m, overbelt magnet, auxiliary hopper attachment panels, hopper wedge, water spraying system, winter package, LED light package		Oversize reduction "Limiter", shredder packages of size S, M, L or XL, rear belt length 7 m, overbelt magnet, auxiliary hopper attachment panels, hopper wedge, water spraying system, winter package, LED light package	

## SHREDDING PACKAGES SHAFT WITH TEETH + COMB BAR + LIMITER (IF NECESSARY)

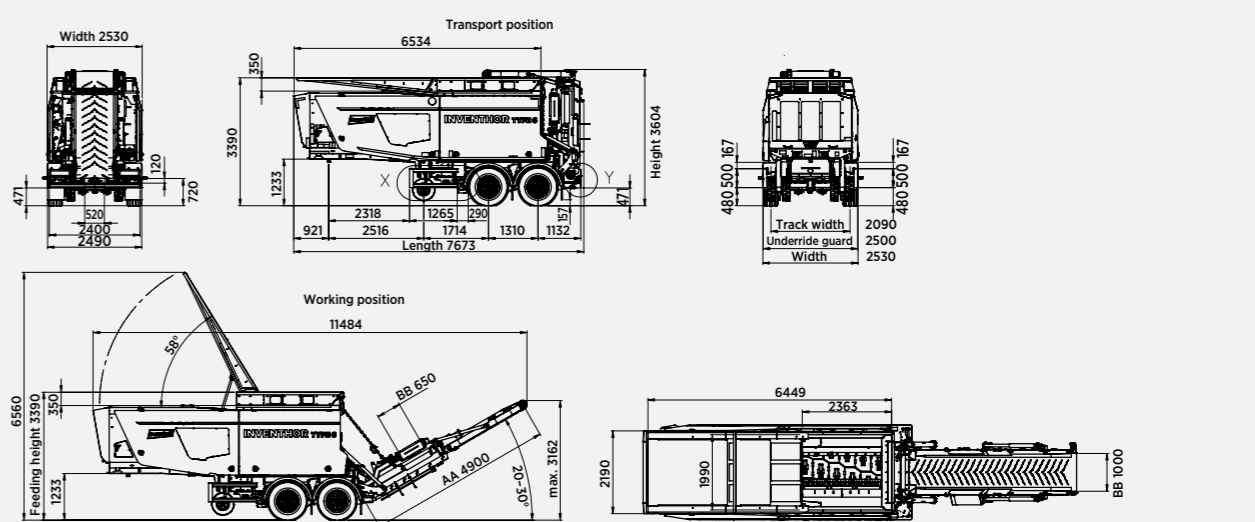
PACKAGE	SIZE XL (600)	SIZE L (600)	SIZE M (800)	SIZE S (800)
	on request			on request
Engine	CAT 310 kW	CAT 310 kW / MTU 260 kW	CAT 310 kW / MTU 260 kW	CAT 310 kW
Type		Shredding shaft with 30 (CAT only) or 20 teeth (14 comb teeth)	Shredding shaft with 72 teeth (2 comb plates)	
Diameter	600 mm	600 mm	800 mm	800 mm
Tooth length	170 mm	174 mm L / L-C3	100 mm	60 mm
Limiter		7 x Limiter L 600	9 x Limiter M 800	
Main areas of use	Heavy waste / waste wood	Green waste/waste wood/MSW/C+D/C+I waste/roots	Waste wood/limited special materials	Waste wood only

Limiter system available for all types of teeth - Limiter use in waste wood - only partially in other materials

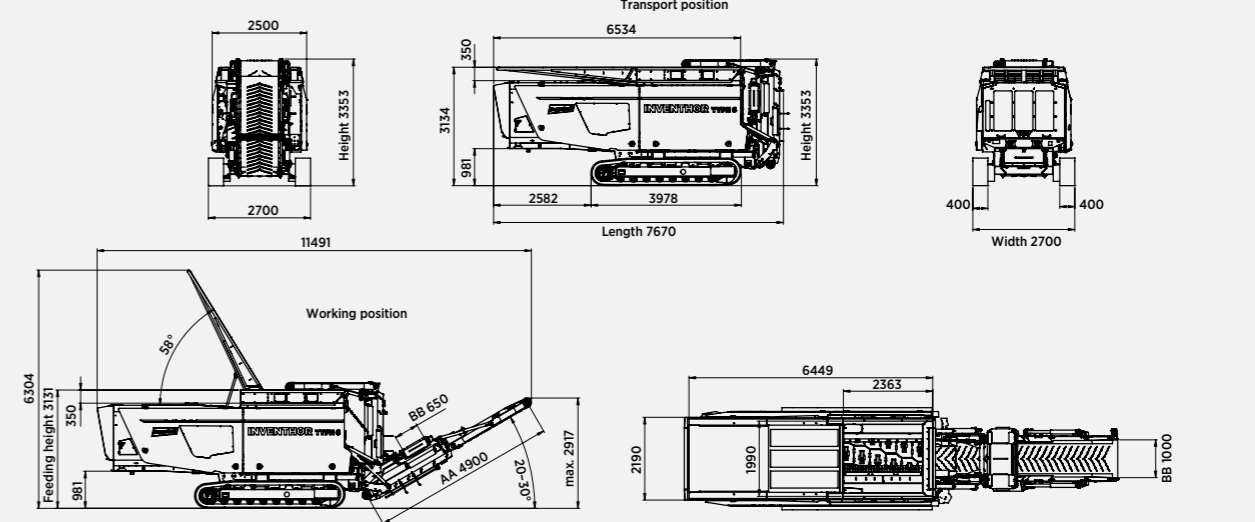
### 3-AXLE TRAILER CHASSIS



### SEMI-TRAILER CHASSIS



### TRACK-MOUNTED CHASSIS



\* MTU engines are based on Mercedes-Benz's proven engine technology. As of August 2020 - Subject to changes. All dimensions shown in mm. The information is to be regarded as approximate. Figures and descriptions might include options or additional components that are not part of the standard equipment.



## Breaks up more. Takes in more.

- modular, individual design
- great flexibility
- moderate operating costs, high machine uptime
- outstanding shredding capacity even with demanding applications
- excellent monitoring concept for shredding process
- maximum production rates
- quick re-start after maintenance and improved on-the-job safety
- lower specific fuel consumption and reduced noise emissions



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