

# WOODTRONIC SERIES



*Simply No.1*

**High-Tech for All Carbide-Tipped  
Circular Saw Blades  
Production and Regrinding**



# The Woodtronic Family – the one for all carbide-tipped circular saw blades Wood, Plastics, Metals, NF Metals, Acrylic Glass

With the product family strategy WALTER acquired a worldwide reputation. A product family offers more customized solutions for every requirement, such as the new big Woodtronic Family. The Woodtronic is able to re-grind or produce every carbide-tipped circular saw blade within the diameter range of 80 to 1,000 mm.

With the new Woodtronic Series WALTER sets the standard. The graphics supported operator guidance makes the grinding of any tooth shape in any sequence required very simple. With the new Woodtronic CNC 6F even the grinding of tooth side faces proves to be very convenient and user-friendly. Optional handling components, such as

the regrinding or production loader systems provide the highest degree of automation.

For example: complete machining of hollow teeth, grinding of the face of tooth, and the "European Triple Chip" geometry on the top of teeth, is only one of the advantages offered by the new Woodtronic. The WALTER Software "Sawgrind" under the user-friendly operating system Windows 95 considerably contributes to the technical progress. Everything is possible, no matter whether standard or free programming.

The carbide-tipped circular saw blades ground by WALTER are used in every industry type: in forestry for solid wood, in the furniture industry for wood, plastics and wood composites, in window manufacturing for wood, plastics and aluminium, in interior work, in the construction of shops and exhibitions stands for composite materials, acrylic glass, NF metals and metals.

In this field, too, WALTER is the partner in systems offering leading grinding technology, including software, training and service.

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*The saw blades ground by the Woodtronic Family have been tried and tested in all industry types, from the woodworking industry through to the furniture industry to the different types of plastic and metal working industries.*





*Woodtronic CNC 6F  
The side face specialist for the automatic production*



*Woodtronic CNC 5  
for complete machining  
operations production  
and regrinding*



*Woodtronic NC 3,  
the reasonably  
priced machine  
to start with the  
Woodtronic family*



*Woodtronic CNC 5  
with regrinding loader  
real productivity progress in the regrinding shops*

## The new Woodtronic CNC 5 – For complete machining operations in production or regrinding

With five dynamic CNC axes, the Woodtronic CNC 5 produces and regrinds all tooth geometries with the highest precision. The mechanics and electronics of machine are designed to achieve maximum performance. The rigid and stable machine base creates the basis for high grinding precision and long life. The three-phase servo motors with automatic control system closed loop ensure excellent grinding performance due to their dynamic power development. The motors and controls have stood their tests in the industry, they are extremely reliable and require very little maintenance or service.

Typical of WALTER is the easy handling of the machine: plain text display and operator guidance in the WALTER Window Mode, combined with perfect ergonomics. This is the way performance is made great fun! Experienced grinding specialists will greatly appreciate it.



*CNC 5 Grinding Head  
with face and top wheel*



*CNC indexing unit: indexing according to  
specification or variably; everything is  
possible!*



*CNC 5 Grinding scenario:  
axis angle on the face*

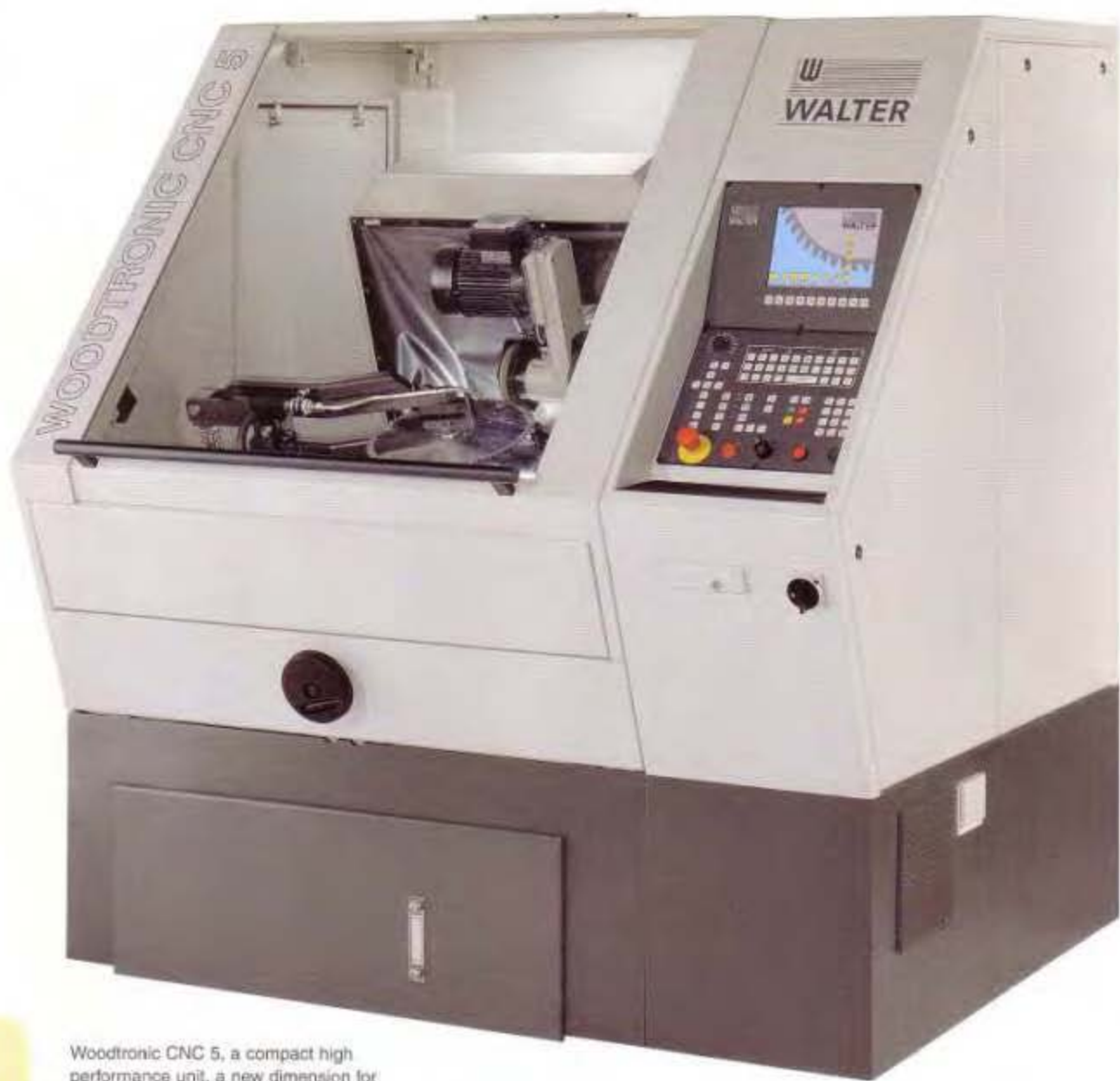


*CNC 5 Grinding scenario: chip breaker*

### Worldpremier: The complete machining of hollow-tooth saw blades



The "hollow-tooth grinding spindle" option ensures the complete machining of hollow teeth. It is the premiere for the complete grinding of face and top of teeth in one operation.



Woodtronic CNC 5, a compact high performance unit, a new dimension for grinding with 5 axes, with impressive appearance.

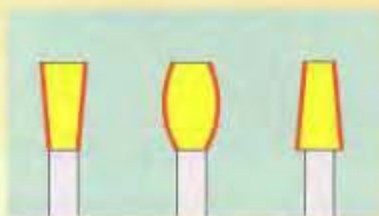
**Stable –**  
solid cast bed, vibration reducing, teeth featuring high surface finish

**Precise –**  
servomotors with integrated measuring system, precise axis positioning

**Fast –**  
highly responsive three-phase servomotors, considerably reduced downtime



## Woodtronic CNC 6F – The Side Face Specialist in production grinding



*The above tooth side faces are ground with the Woodtronic CNC 6F in a single setting. The grinding zones are marked in red.*

The side face grinding is the first grinding step for carbide tipped circular saw blades. It has a significant effect on the cutting quality of the saw blade.

Woodtronic CNC 6F is specialised in grinding side faces. With 6 dynamic NC axes, it achieves maximum performance. All shapes of tooth in any sequence required can be ground without restriction.

The above tooth side faces are ground with the Woodtronic CNC 6F in a single setting. The grinding zones are marked in red.

The Woodtronic CNC 6F uses the same components as the Woodtronic CNC 5, thus ensuring perfect operating convenience. A welcome fact resulting in low operating and maintenance costs.



## Woodtronic NC 3 – The Regrinding Specialist for all geometries of tooth



Grinding scenario: Grinding the top of "Alternate Top Bevel tooth". The face is ground by manually swivelling the B axis. No grinding wheel change is required.

Woodtronic NC 3 with WALTER Software "Sawgrind" is a profitable investment. Short learning curves and high efficiency due to the NC control and 3 NC axes have built up the reputation of the NC 3 as the regrinding specialist on the market.

The universal application for all carbide-tipped circular saw blades of any shape of tooth and in any sequence required is of great advantage. The WALTER software "Sawgrind" ensures grinding of all standard tooth shapes and free programming. With the Woodtronic NC 3 the grinding shop meets every requirement.



Grinding scenario: Grinding the top of "Alternate Top Bevel tooth". The face is ground by manually swivelling the B axis. No grinding wheel change is required.

## Woodtronic CNC 5 with regrinding loader – Long-awaited by the regrinding shops: automatic regrinding in multi-shift operation

Every grinder knows the annoying problem: each carbide-tipped circular saw blade differs in terms of diameter, shape of tooth and sequence. Within the range of diameters from 150 to 630 mm, WALTER solved the problem. Woodtronic CNC 5 combined with regrinding loader automatically grinds the carbide-tipped circular saw blades during the minimally manned work shift.

The grinding data of circular saw blades is entered into the Woodtronic control according to the loading sequence.

As measured, the blades are stored in the magazine of the transport trolley. After approximately 40 carbide-tipped circular saw blades, the grinding capacity of one shift is reached and the magazine is moved into the loader.



*The saw blades are pre-positioned in the stack by the optional laser.*



*The carbide-tipped circular saw blades are stacked in any sequence, thus making regrinding efficient and profitable.*

When programming the machine for the next magazine, the grinding operation is not interrupted. So you can pre-program the Woodtronic CNC 5 with loader during the day and have it automatically grind during the night.







*The measuring probe controls the positioning of saw blades and automatically compensates for the grinding wheel wear.*



#### **Measuring device "Sawcheck"**

Option for the online connection with Woodtronic CNC 5. During the day the machine is preprogrammed for grinding during the late and night shifts.

## Woodtronic CNC 5 and Woodtronic CNC 6F with production loader – Automatic Customized Production

With this machine combination WALTER offers the manufacturers of carbide-tipped circular saw blades the suitable solution specially geared to meet individual requirements. The machine combination of CNC 6F and CNC 5 is designed for the production of every carbide-tipped circular saw blade required. Even extremely complicated geometries can be ground totally unsupervised. Divided into two grinding cycles on two machines, first the saw blade side faces are ground with the CNC 6F. Then, the face and top of teeth are completely ground on the CNC 5 with 5 NC axes.

The transportation to and between the two Woodtronic machines is ensured by a robot system with 4 NC axes. The machine control provides the time optimized run according to the grinding cycles.

The configuration of this production system can be optimized according to the requirements. Decision relevant parameters are considered for the geometry of saw blades, quantity and program changing cycles.

The system consists of the Woodtronic CNC 6F and Woodtronic CNC 5 connected with each other through the production loader.

Performance optimised solutions can be created by using several Woodtronic CNC 5 machines together with one or two Woodtronic CNC 6F with individual production loader systems.

*Woodtronic CNC 6F  
for side face grinding  
in a single setting*

*Mobile robot system  
with double-sided  
magnetic gripper*

*Standardized  
transport trolley*





Woodtronic CNC 5  
grinding the face and top of teeth  
in a single setting



# Power Centre à la WALTER

## CNC Control with Walter Window Mode

### High-dynamic three-phase servodrives

Typical of WALTER is the unique operating convenience due to the WALTER Window Mode on TFT colour flat screen in optimum ergonomic position. With WALTER Window Mode the operator is guided through the input menus in an easy and reliable way. Operating convenience à la WALTER, that means: security and motivation.

The software intelligence is used by the CNC control with dynamic axis positioning.

Using this configuration, the grinder of carbide-tipped circular saw blades is offered all possibilities. Even the geometries usually requiring a high input of work and time, are now simply and quickly ground with the Woodtronic CNC 5.

For the axis drives, WALTER has applied three-phase servomotors with closed loop position control. This solution meets the maximum requirements in terms of dynamics and positioning accuracy.

Special features, such as no maintenance, compact design and dynamic development of power are inherent in the High Tech Woodtronic Product. The high number of revolutions are very precisely controlled through the integrated measuring system. Combined with the outstanding capacity of machine, excellent grinding results are ensured.





# Walter CNC Continuous Path Control – Maximum Precision of Contour and Flexibility

Unusual tooth geometries and sequences are the rationalisation potential of the future. The Woodtronic user, however, will never lose his composure. With the flexible CNC path interpolation and different software programmes for flexible programming, WALTER is up to the innovative trends.

## CNC Path Control for all geometries of tooth

Whatever the shape of top, breast and side faces of saw blades, the CNC path control takes every curve. Equipped with this intelligent and highly flexible axis control, the Woodtronic CNC5 for

the breast face and top and the Woodtronic CNC 6F for side faces are ready and well prepared for the future innovations.

### Shaping examples Top



*Top with 1st and 2nd clearance angles*

### Shaping examples Breast



*Breast face with concave cutting form*

### Shaping examples Top



*V-groove on the top*

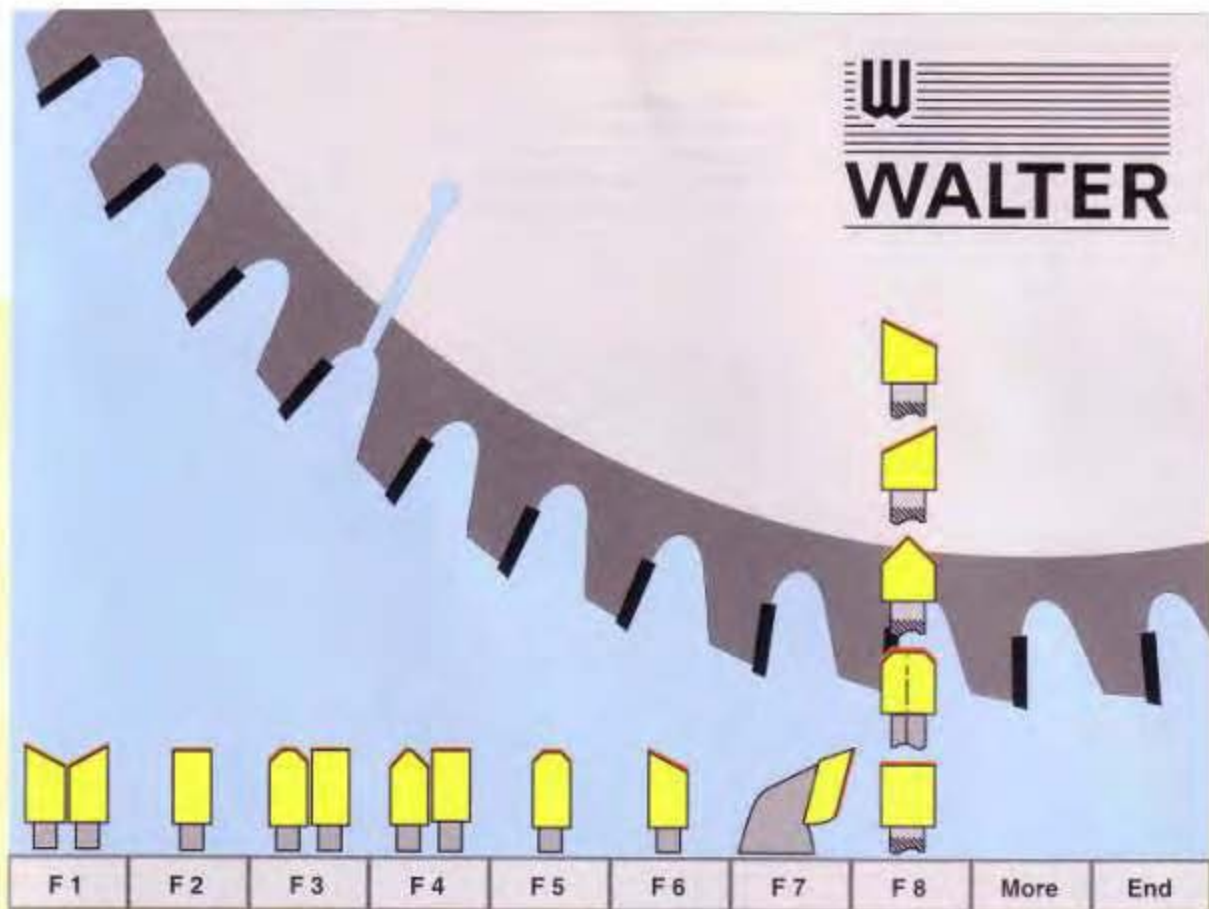


*Grinding of top with several facets*



*Grinding of top with corner radius*

# WALTER Software Strategy – Standard Programs or Free Programming Versatile application is the advantage



The WALTER Software Strategy contains a package of programs from standard programs to free programming. It is the quickest way from the drawing to the finished carbide-tipped circular saw blade. Immediate grinding without programming is achieved with the WALTER Software Strategy.

Pressing function key "F" calls up the desired software program:

- P1 "Alternate Top Bevel Tooth"
- P2 "Flat Top Tooth"
- P3 "Triple chip tooth"
- P4 "European Triple chip tooth"
- P5 "Flat Top with corner break tooth"
- P6 "Top Bevel (left or right-hand) tooth"
- P7 "Face grinding"
- P8 "Free programming of special tooth shapes at any sequence required"
- P11 "Repair Program"

Pressing "next" selects the following programs:

- P 12 "Braunschweiger geometry"
- P 13 "Hollow tooth program"

The "repair program" is included in every program.



## Software Package P8 "Free Programming"

Those who are really able to regrind or produce every carbide-tipped circular saw blade will gain a competitive edge on the market. The software package P8 "free programming" is designed for grinding optimised saw blades.

With this program, the machine operator is able to quickly and easily create his own program according to the individual requirements. Within the scope of the specified diameter, every shape of tooth can be freely programmed in any sequence required.

ACB:		Wheel-IDM :	WHEELS-UB
Type of tool :		Tool-IDM :	STD-68
Geometry		Administration	
Free Programming Facu			
Tooth Form			
		Diameter: 1.000 2.000 No. of Teeth: 10 Width of Saw Body: 1.000 Offset: 0.000 Stock Removal: 0.000 0.000 Grind Length: 1.000 No. of Kickbacks: 0 Index Point Offset Z: 0.000	
Change Direction:		Repaired: Yes <input checked="" type="radio"/> No <input type="radio"/>	
Cycle:		Grind: <input checked="" type="radio"/> Face <input type="radio"/> Top <input type="radio"/> CO	
		Grinding Method: <input checked="" type="radio"/> Manuf. <input type="radio"/> Regrind	
Default			
HELP DAT>IDM POSIT AUTOM SAVE LOAD SAW IDM>ACB END			

## Software Package 12 "Braunschweiger geometry"

For the grinding of circular saw blades for steel, aluminium and NF metals, the "Braunschweiger geometry" is indispensable.

With this new software generation, all types of deflection shoulders and chip grooves can be produced and ground.

ACB:		Wheel-IDM :	WHEELS-UB
Type of tool :		Tool-IDM :	STD-512
Geometry		Administration	
Braunschweiger-Tooth			
Tooth Form			
		Diameter: 1.000 2.000 No. of Teeth: 10 Width of Saw Body: 1.000 Offset: 0.000 Stock Removal: 0.000 0.000 Grind Length: 1.000 No. of Kickbacks: 0 Index Point Offset Z: 0.000	
		Repaired: Yes <input type="radio"/> No <input checked="" type="radio"/>	
		Grind: <input checked="" type="radio"/> Face <input type="radio"/> Top <input type="radio"/> Face	
		Grinding Method: <input checked="" type="radio"/> Manuf. <input type="radio"/> Regrind	
Default			
HELP DAT>IDM POSIT AUTOM SAVE LOAD SAW IDM>ACB END			

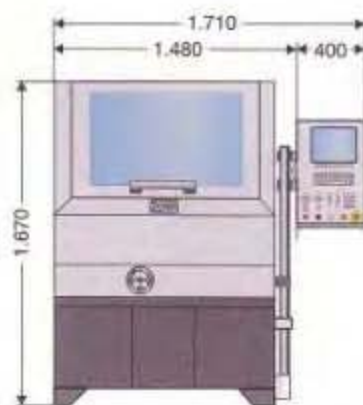
# Technical Data

## Woodtronic Series

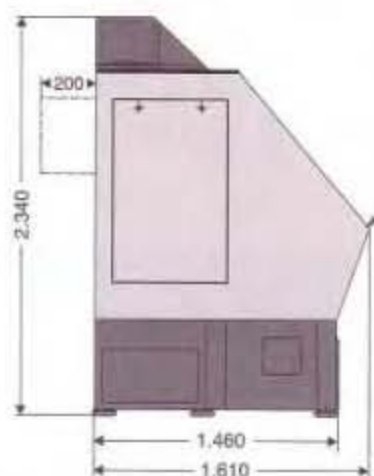
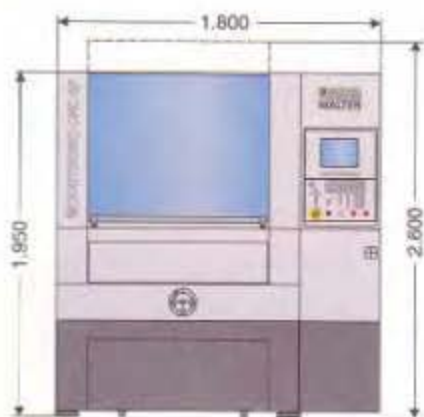
Type	NC 3	CNC 5	CNC 6F
Order No.	302 073-597	305 503-597	306 036-597
Standard colour	RAL 7035/7043	RAL 7035/7043	RAL 7035/7043
<b>Circular Saw Blade</b>			
Outside diameter	80–1.000 mm	80–1.000 mm (1.200)	80–1.000 mm (1.200)
Bore diameter	from 10 mm	from 10 mm	from 10 mm
Thickness of blade	up to 8 mm	up to 12 mm	up to 12 mm
Tooth pitch	6–125 mm	4–125 mm	4–125 mm
Breast angle	-25/+30 degrees	-40/+45 degrees	
Back clearance angle	1–25 degrees	1–40 degrees	
<b>Grinding Head</b>			
Grinding wheel diameter	max. 160 mm	max. 200 mm	max. 200 mm
Power output, approx. 3,000 min-1	1,0 kW	1,1 kW	1,1 kW
<b>Weight</b>			
	930 kg	1.800 kg	1.800 kg
Power Requirements, approx. 400 V/50 Hz	7 kVA	12 kVA	12 kVA
<b>Integrated Coolant System</b>			
Tank capacity	approx. 70 l	approx. 150 l	approx. 150 l
Coolant pump	50/l min, 3 bar	60/l min, 3 bar	60/l min, 3 bar
<b>Regrinding Loader</b>			
Capacity		approx. 50 saw blades	
Diameter		150 – 600 mm (Option 680 mm)	

Capacity of production loader upon request.

All Dimensions in mm



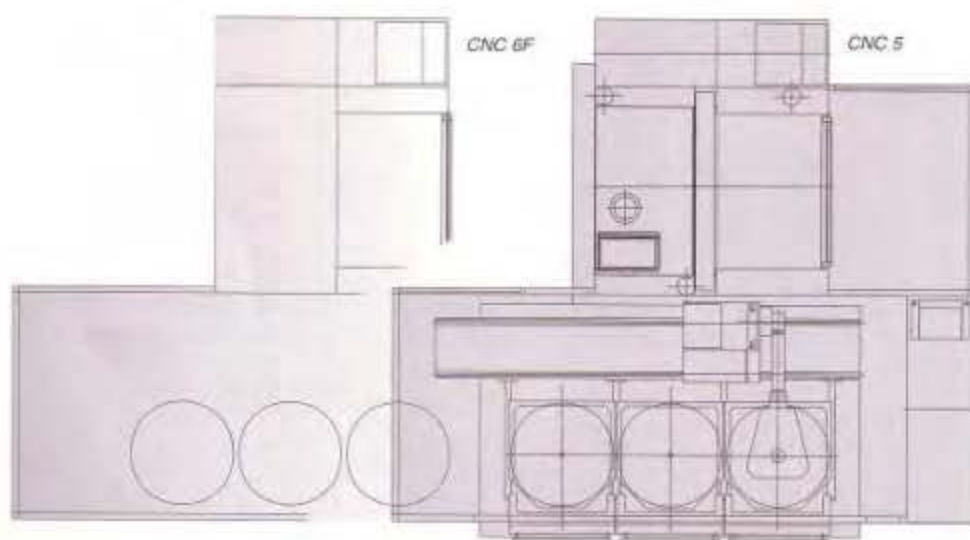
Woodtronic NC 3



Woodtronic CNC 5 / CNC 6F



Woodtronic CNC 5 with regrinding loader



Woodtronic CNC 5 und CNC 6F with production loader, upon request