

CNC-DUO Series



Advanced technology, the unique solution for saw production...

CNC Double Side Grinding Machine

7-axes full CNC control

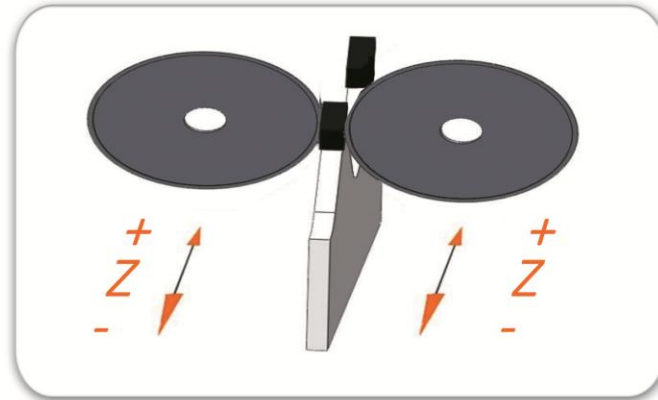
2 additional axes for servo spindle control

The flexible, profitable solution

High technology to lead the ever-changing world of tool processing.
ABM offers the complete solution: getting the most out of the CNC



CNC-DUO is an ideal machine for carbide-tipped circular saws production. Thanks to the CNC control, all desired geometry settings can be performed from panel. User-friendly interface and machine's ease of use minimizes the need for qualified operator. It is a high speed and high precision full CNC controlled side grinding machine. On the CNC-DUO Series, two vertical grinding heads are adapted to our classical top and face grinding machine, the tangential and radial angles are automatically adjusted easily from the CNC Control panel:



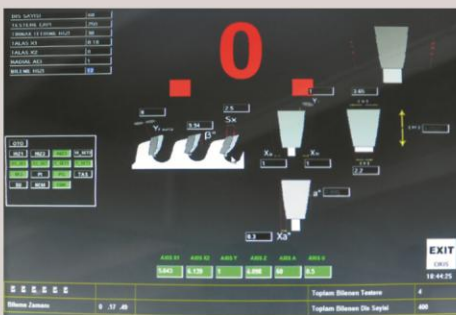
A versatile response to meet all demands...



Easily grinding of stroke blades thanks to the motor controlled clamping. Patented pneumatic finger system provides the indexing finger to step in/out without damaging the side of carbide tooth.

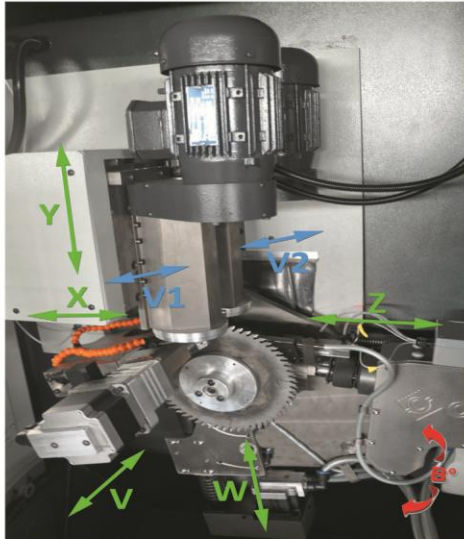
Features

- 7-axes fully CNC control.
- Special plating on mechanical components ensure non-corroding and hardening.
- Group tooth and Variable pitch indexing by intelligent finger.
- Unique software for Newly Replaced Teeth and Saw Blade Production. Oscillation program for multiple infeed with rough, finish amounts and finish cycles.
- 17" LCD display and operating interface in any stated language.
- Ready tooth form programs, unlimited memory for saving.
- Grinding of all types in one cycle for wood and metal industries.
- Angular or dimensional parameter input for Radial angles.
- Maximum outside diameter $\varnothing 810\text{mm}$.
- Clamping by Microstep motor ensures automatic clamping distance control, clamping torque control and blade thickness control to self center bevels.
- Automatic tooth pitch calculation and ability manual input.
- Central lubrication system reducing maintenance and increasing machine life.
- Windows® based PC control enables update over internet or by flash drive
- Separate electrical and machine cabins provide noise, dust and heat insulation.
- Ready for oil coolant.
- Operator-friendly machine program.
- Robust base constructed in ergonomic cabin.



Operating screen for side grinding
Tangential and Radial Angles are controlled from the CNC operating panel

Become independent! Optimum use of the fast grinding machine and the most operator-friendly control system. Special high speed set-ups can give “off-carbide” grinding time which increases productivity without depending on grinding accuracy or wheel life. Automatically adjustable infeed and bevel angles by mean of CNC control.

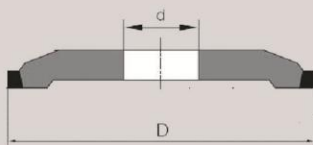


- (X) Tangential Clearance Angle Axis
- (Y) Grinding Axis
- (Z) Indexing Axis
- (V1) Grinding Head - Left
- (V2) Grinding Head - Right
- (B) Cutting Angle Axis
- (V) Clamping Axis
- (W) Saw Blade Positioning Axis

The true innovation is the product of experience and dynamics...



CNC-DUO working area



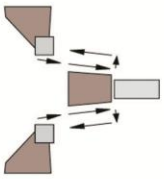
Grinding wheel FEPA 1A1F
D=Ø100 mm d=Ø20 mm

Technical Specifications

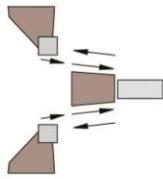
- | | |
|-----------------------------------|-----------------|
| • Circular saw outside diameter | Ø150-810 mm |
| • Bore diameter | from Ø12 mm |
| • Blade thickness | Maximum 6 mm |
| • Tooth pitch | Maximum 100 mm |
| • Grinding angle | (-10°) - (+30°) |
| • Bevel angle | ±6° |
| • Grinding wheel outside diameter | Ø100 mm |
| • Grinding wheel bore diameter | Ø20 mm |
| • Coolant motor capacity | ~70 l/min |
| • Coolant container capacity | ~100l |
| • Microstep rapid speed | 50 mm/sec |
| • Servo rapid speed | 150 mm/sec |
| • Connected load | ~3,5 kW |
| • Net/gross weight | 985/1050 kg |
| • Dimensions | 125*185*215 cm |

At ABM, we develop our machines, our own electronic systems and application software and manufacture all main mechanical components. Finally, we assemble and test the final product to global machine standards. Whichever ABM machine you choose for your grinding, you will know that it is built to meet all market demands.

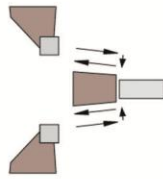
CNC-DUO has 5 main production programs:



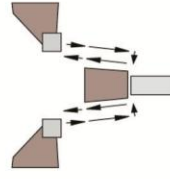
Fore direction grinding with step-out



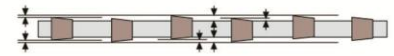
Fore direction grinding without step-out



Back direction grinding with step-out



Oscillation grinding with multiple infeed and multiple cycles



Free programming for various side geometries, variable tooth pitch and group teeth

The ABM CNC-Motion Control difference: productive and always ahead...

OPTIONS

- CNC-DUO 600 for maximum $\varnothing 600$ mm blades
- Open loop coolant unit for factories with central coolant filtration system
- Special grinding wheels developed by ABM for production
- Oil filtration system - FILTRON
- Air filtration system
- Oil coolant system (for multi-shift-operating facilities)
- Side gauge



Oil Filter