



Woodworking Technology

 **THAINAGOYA**
MACHINERY



Messrs

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Bangkok 10120

Offer N°00928

MW21.31M5



M0MW2131M501

N. 1

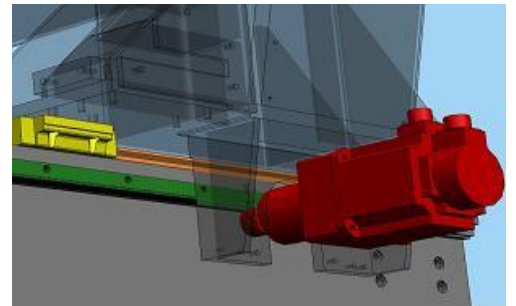
MW 21.31M5
MACHINING CENTER WITH 5 CONTROLLED AXIS AND MATRIX TABLE FOR
NESTING OPERATIONS..

BASEMENT
HEAVY MONOLITHIC BASEMENT. ELECTROWELDED AND
ADEQUATELY RIBBED STRUCTURE TO GUARANTEE RIGIDITY AND LONG LASTING
PRECISION.

CARRIAGE FOR OPERATING UNITS
BRIDGE STRUCTURE (Y AXIS) WITH HIGH RIGIDITY MADE OF WELDED RIBBED
STEEL.IT MOVES LENGTHWISE (X AXIS) ALONG THE BASEMENT OF THE MACHINE
AND SUPPORTS A ALUMINIUM CARRIAGE (Z AXIS) ON WHICH ARE MOUNTED THE
OPERATING UNITS.



X AXIS DISPLACEMENT
TO GUARANTEE A HIGH RIGIDITY OF THE DISPLACEMENT ON "X" AXIS,
THE BRIDGE TYPE STRUCTURE MOVES BY MEANS OF TWO "RACK-PINION" SYSTEMS.
EACH SYSTEM IS CONNECTED TO ONE MOTOR (GANTRY AXIS)
RACKS WITH GROUND AND RAKING TEETH ARE MADE UP OF HARDENED AND
TEMPERED STEEL; THE TWO PINIONS WITH GROUND TEETH ARE TEMPERED
AND ARE INTEGRAL TO TWO EPICYCLOIDAL REDUCTIONS GEARS WITH
HIGH PRECISION.
TWO FELT PINIONS ARE COUPLED TO THE STEEL PINIONS AND ARE COSTANTLY
LUBRICATED AND APPLY A LUBRICATING FILM TO THE TEETH OF THE
RACK TO GUARANTEE LONG LASTING AND PRECISION.



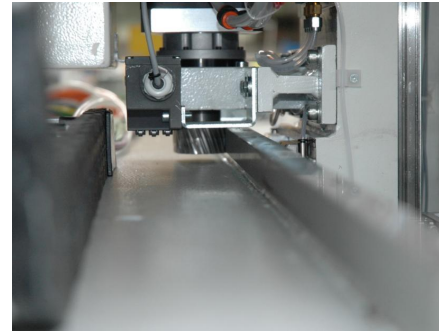
AXIS DISPLACEMENT Z
DISPLACEMENT WITH HIGH PRECISION PRELOADED LEAD SCREWS.
THE PRELOADING GUARANTEES A TOTAL ABSENCE OF PLAYS FOR HIGH
DISPLACEMENT PRECISION.
THE NC CONTROL OF ACCELERATIONS ALONG WITH THE HIGH RIGIDITY
OF THE STRUCTURE ALLOWS FAST DISPLACEMENT WITHOUT VIBRATIONS.



AXIS DISPLACEMENT Y AXIS

Y AXIS DISPLACEMENT WITH RACK AND PINION.

RACK WITH GROUND AND RAKING TEETH MADE UP OF HARDENED AND TEMPERED STEEL; TEMPERED PINION WITH GROUND TEETH.THE PINION IS INTEGRAL TO A EPICYCOIDAL REDUCTION GEAR WITH HIGH PRECISION. ONE FELT PINION IS COUPLED TO THE STEEL PINION AND IS COSTANTLY LUBRICATED AND APPLY A LUBRICATING FILM TO THE TEETH OF THE RACK TO GUARANTEE LONG LASTING AND PRECISION.



SLIDEWAYS

ALL DISPLACEMENTS ARE WITH LINEAR GUIDES WITH PRELOADED LINEAR BEARINGS WITH DOUBLE SEAL TO PREVENT THE DUST ENTERING INSIDE THE BEARINGS.THIS SYSTEM GUARANTEES UNLIMITED LASTING WITHOUT ANY MAINTENANCE.



LUBRICATION

THE MACHINE IS EQUIPPED WITH A CENTRALIZED LUBRICATION SYSTEM WHICH PROVIDES THE DISTRIBUTION OF THE LUBRICANT TO ALL THE MOVABLE PARTS OF THE MACHINE.



MOTORIZATIONS

THE AXIS MOTORIZATION IS WITH BRUSHLESS MOTORS (WITHOUT BRUSHES) WHICH ALLOW SPEEDS AND ACELERATIONS IMPOSSIBLE TO BE REACHED WITH THE TRADITIONAL CC MOTORIZATION AND BRUSHES. NO MAINTENANCE REQUIRED BEING THEM EQUIPPED WITH DIGITAL TECHNOLOGY, THEY GRANT HIGHER PRECISION AND BETTER FINISHING OF MACHININGS.

STROKES AND WORKING FIELDS

WORKING STROKES:

- X = 4595 MM
- Y = 3170 MM
- Z = 665 MM

WORKPIECE CLEARANCE :

- X STOPS CLEARANCE = 3120 MM
- Y STOPS CLEARANCE = 2195 MM
- X = 400 MM

THIS FIGURE CAN BE REDUCED UP TO 320 MM IF BORING HEAD OR/AND TOOL CHANGER (MOUNTED ON HEAD) ARE FORECAST.
PLEASE CHECK TECHNICAL DRAWINGS.

ELECTROSPINDLE WORKING STROKE :

- Y = 2396 MM (VERTICAL ROUTER AXIS)

AXIS SPEED:

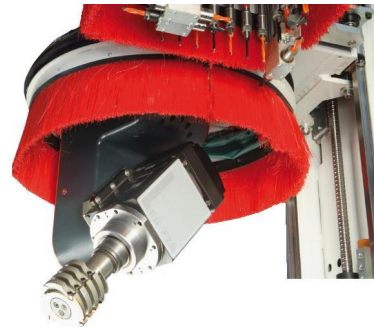
- X = 80 M/MIN
- Y = 80 M/MIN
- Z = 25 M/MIN
- VECTORIAL SPEED = 115 M/MIN

OGT40050 **N. 1**

EUROVOLTAGE 380/400/415V 50/60HZ

OPROJ3551 **N. 1**

- 5 AXIS BIROTATIVE OPERATING UNIT
 BIROTATIVE OPERATING UNIT FOR 5 AXIS MACHINING.
 THE HIGH RIGIDITY OF HEAD STRUCTURE ALLOWS THE USE OF THE ELECTRO-SPINDLE IN ALL DIRECTIONS TO MAKE MAXIMUM USE OF ITS POWER ALSO FOR MACHINING USUALLY CARRIED OUT BY AGGREGATES.
 ROUTING UNIT LIQUID COOLED.
 TOOLS HOLDING CONE LOCKED BY BELLEVILLE WASHER, UNLOCKING WITH PNEUMATIC CYLINDER.
 TWO SENSORS GUARANTEE THE CORRECT HOOKING OF THE TOOL.
 CLEANING SYSTEM OF THE CONE WITH COMPRESSED AIR FOR SAFE COUPLING AND LOCKING OF THE TOOL.
 ELECTROSPINDLE 12 KW LIQUID COOLED
- HSK-F63 CONE ATTACHMENT
 - MAX.REVOLUTION SPEED 24.000 RPM
 - "C" AXIS ROTATION +/- 360°
 - "A" AXIS ROTATION +/- 108°
 - LIQUID COOLING UNIT
 - INVERTER "STATIC FREQUENCY CONVERTER"
 - TOOLS REVOLUTION SPEED NC CONTROLLED
 - AUTOMATIC CONTROL OF TOOL BREAKING FUNCTION
 - PROTECTION AGAINST CURRENT AND TENSION OVERLOAD AND SHORT CIRCUIT
 - TROUBLES DIAGNOSTIC VISUALISED ON DISPLAY



OGG2016PH **N. 1**

- "CAROUSEL" TYPE TOOL MAGAZINE WITH 16 POSITIONS FOR AUTOMATIC TOOL CHANGE.
- MOUNTED ON CARRIAGE SIDE.
 - HSK F63 CONE ATTACHMENT.
 - MAX TOOL DIAMETER 160 MM.
 - MAX SAW BLADE DIAMETER : 350 MM
 - CENTER TO CENTER DISTANCE BETWEEN THE TOOLS : 118 MM.
 - MAXI TOTAL WEIGHT OF 16 TOOLS : 45 KG
 - MAXI WEIGHT FOR EVERY SINGLE TOOL : 6 KG
 - ROTATION WITH BRUSHLESS MOTOR.
- # CONES AND COLLETS NOT INCLUDED

DCOPJ00010 **N. 1**

MATRIX TABLE

GROOVED MULTIFUNCTIONAL WORKING TABLE (50 MM PITCH) TO HOLD BOTH LARGE AND SMALL SIZED PANELS BY MEANS OF ADDITIONAL SUCTION CUPS. BASE MADE OF THICK DRAWN PIPES AND PHENOLIC FLAT PLATE TO GUARANTEE LONG LASTING HIGH RIGIDITY AND FLATNESS EVEN IN HEAVY DUTY CONDITIONS. PHENOLIC PLATE DIRECTLY FIXED TO THE BASE TO AVOID VIBRATIONS. SURFACE WITH HOLES FOR VACUUM FLOW AND GROOVES TO HOLD THE PIECE BY MEANS OF SIMPLE RUBBER GASKETS (STRIPES SHAPED)



OPTIONAL MATRIX TABLE CONFIGURATIONS.
FOLLOWING OPTIONAL CONFIGURATIONS CAN BE CHOSEN AS AN ALTERNATIVE TO STANDARD COMPOSITION :

OGG00217C **N. 1**

CONFIGURATION OF WORKING TABLE WITH PREARRANGEMENT FOR AUTOMATIC LOADING/UNLOADING OF PANELS AND DOUBLE ZONE WORKING TABLE SUPPLIED WITH :

- 1 REAR BAR WITH PNEUMATIC MOVEMENT
- 4 FRONT STOPS (2+2)
- 1 R/H SIDE STOPS
- 2 L/H SIDE STOPS

THE WORKING TABLE DIVIDED INTO TWO ZONES ALLOWS LOADING OF ONE PANEL IN ONE WORKING ZONE WHILE THE MACHINE IS WORKING IN THE OPPOSITE ZONE.

OCB00031 **N. 1**

AUXILIARY PANELS UNLOADING UNIT :
ALLOWS THE MACHINED PIECES TO BE TAKEN OFF THE WORKING TABLE THAT WILL THEN BE CLEANED BY THE SUCTION DEVICE
WORKING HEIGHT CAN BE ADJUSTED MANUALLY THROUGH A HANDWHEEL WITH POSITION INDICATOR.

- # COMPULSORY WITH UNLOADING UNIT WITH MOTORIZED BELT
- # IT IS COMPULSORY TO CHOOSE THE PREARRANGEMENT FOR TABLE WITH AUTOMATIC LOADING/UNLOADING



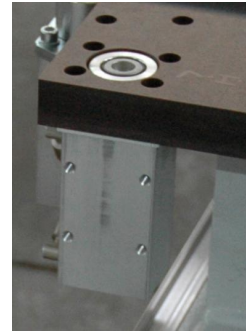
OGP00026 **N. 1**

AUTOMATIC SUBDIVISION OF WORKING TABLE ACCORDING TO PANEL DIMENSIONS TO BE MACHINED.
NUMERIC CONTROL CONCENTRATES VACUUM EXCLUSIVELY ON THE TABLE ZONE NECESSARY TO CLAMP THE WOODEN PIECE.
THIS AUTOMATION ALLOWS A BETTER CLAMPING OF THE WOODEN PIECE.
TABLE SUBDIVIDED INTO 8 EQUAL PORTIONS THAT CAN BE PRESELECTED ACCORDING TO THE PANEL DIMENSIONS REQUIRED.

IF THE OPTIONAL O0000CNPCP IS NOT PURCHASED THE TABLE WILL BE SUBDIVIDED INTO 6 PORTIONS.

OW220009 **N. 4**

ADDITIONAL CNC CONTROLLED REFERENCE STOPS FOR MATRIX TABLE.



OGG00006 **N. 1**

VACUUM PUMP 250 M3/H STD
ROTARY VANES PUMP TO GENERATE VACUUM WITH A CAPACITY OF 245 M3/H
AT 50 HZ (285 M3/H AT 60 HZ). THE PUMP IS WITHOUT OIL (DRY) WITH LESS
MAINTENANCE COMPARED TO THE NORMAL OIL PUMP.



OGG00P39 **N. 1**

SENSING DEVICE FOR AUTOMATIC MEASUREMENT OF WORKPIECE'S
THICKNESS.



OGG00474 **N. 1**

PENDANT PUSH-BUTTON STRIP WITH:
- EMERGENCY PUSH-BUTTON
- HOLD PUSH-BUTTON
- START PUSH-BUTTON FOR R/H WORKING AREA
- START PUSH-BUTTON FOR L/H WORKING AREA
- OVERRIDE (MACHINING SPEED VARIATOR)



OPTKT00AU **N. 1**

KIT AUSTRALIA VOLTAGE

00000CNPC N. 1

CNC

- PC INTEL PROCESSOR PLATFORM WITH REAL TIME SOFTWARE WITH 1 MSEC FOR AXIS CONTROL. INDEPENDENT AXES CONTROL WITH 32 AXES CONTROL CAPABILITY

- EMBEDDED SUPPORT FOR MOST COMMON FIELDBUS PROTOCOLS FOR DEVICES INTERCONNECTION INCLUDING ETHERCAT FOR HIGH SPEED AXES MANAGEMENT.

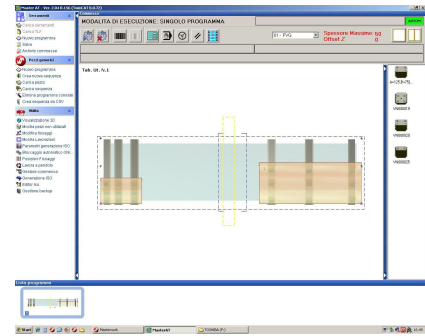
- PLC SOFTWARE IEC 6-1131 COMPLIANT, HIGH LEVEL ISO LANGUAGE DIN66025 COMPLIANT

- PROCESSING TOOL MANAGEMENT FEATURING :

- * TOOL DIAMETER CORRECTION (TC)
- * TOOL CENTER ROTATION (RTCP)
- * 5 AXES KINEMATICS

- INTERPOLATION WITH KERK AND "S" RAMPS

- WINDOWS XP BASED OPERATING SYSTEM OFFERING ALL FEATURES IN TERMS OF MEDIA CONNECTION AND NETWORKING FOR REMOTE DIAGNOSTIC VIA INTERNET



TELEASSISTANCE ON LINE :

MACHINE IS DELIVERED WITH AN ETHERNET CARD REQUIRED FOR THE INTERNET CONNECTION FOR THE TELEASSISTANCE ON LINE.

TELEMATIC CONNECTION TO MASTERWOOD HOT LINE ALLOWS A REMOTE INTERVENTION FOR IMMEDIATE SOLUTIONS TO EVENTUAL PROGRAMMATION PROBLEMS RELATED TO OPERATIVE SYSTEMS, HARDWARE CONFIGURATIONS, SOFTWARES UPDATINGS REDUCING THE COSTS PRODUCED BY THE MACHINE STOP. #ADSL LINE CONNECTION AT CUSTOMER'S EXPENSE.



00000MWC0 N. 1

MASTERWORK MACHINE VERSION

MASTERWORK IS A GRAPHIC PROGRAMMING SYSTEM WHICH ALLOWS TO AVOID THE ISO PROGRAMMING THANKS TO AN EASY, FAST AND INTUITIVE GRAPHIC INTERFACE.

THIS BECAUSE MASTERWORK IS NOT A GRAPHIC COMPILER OF LINES (ISO), BUT IT'S A REAL PROGRAMMING ENVIRONMENT ORIENTED TO THE WORKPIECE.

IT IS A TOOL FOR ALL USERS, BUT SPECIALLY DEDICATED TO WHOM HAVE NO EXPERIENCE OF PROGRAMMING.

MASTERWORK COMPLIES WITH WINDOWS STANDARDS AND GUARANTEES THE IMMEDIATE AND EASY UNDERSTANDING OF ALL COMMANDS.

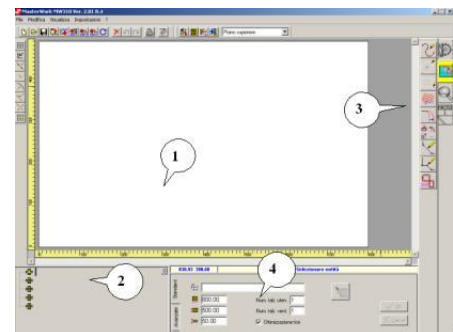
THE MAIN AREAS TO BE USED ARE 4:

- THE FIRST ONE IS THE "CENTRAL WINDOW" (1) GRAPHIC AND INTERACTIVE WHICH VISUALIZES THE MACHINING CARRIED OUT ON THE SELECTED SURFACE WITH ZOOM POSSIBILITY AND PATH SELECTION FOR MODIFICATIONS OR ADDITIONS.

- ON THE L/H WINDOW (2) IT IS POSSIBLE TO ACTIVATE THE MACHINING MENU SELECT THE SURFACE TO BE VISUALIZED, THE MACHINING TO BE MODIFIED OR THE RELEVANT SEQUENCE BY SIMPLY USING THE MOUSE.

- IN THE R/H DOUBLE COLUMN (3) IT IS POSSIBLE TO SELECT THE VARIOUS PHASES FOR CREATING THE PROGRAMME SUCH AS THE DRAWING, THE MACHININGS AND THE ACTIONS TO TAKE: I.E.: DRAW A STRAIGHT LINE OR A CIRCLE. THIS WILL ALLOW TO FILTER THE LARGE NUMBER OF OPTIONS AVAILABLE, MAKING ITS USE MORE RATIONAL AND INTUITIVE.

- IN WINDOWS (4) CAN BE INPUT THE MACHINING PARAMETERS NEEDED FOR THE SELECTED FUNCTION. TO MAKE IT EASY HAS BEEN USED A LARGE NUMBER OF SYMBOLS, MAKING THIS PHASE FULLY GRAPHIC AND INTUITIVE.



MASTERWORK DOESN'T NEED MACROS OR EXTERNAL ADDITIONS FOR BASIC FUNCTIONS BECAUSE THE GRAPHIC FUNCTIONS THEMSELVES ARE MORE THAN ENOUGH. MASTERWORK IS ABLE TO CARRY OUT PARAMETERS.

IT IS ALSO POSSIBLE TO USE ADVANCED FUNCTIONS SUCH AS GRAPHIC VISUALIZATION STEP BY STEP OF THE PROGRAMME, VISUALIZATION OF TOOL PATH ON THE PIECE, ZOOM FUNCTION, MEASURING FUNCTIONS, MACHINING TIME CALCULATION AND PROGRAMME CHECK.

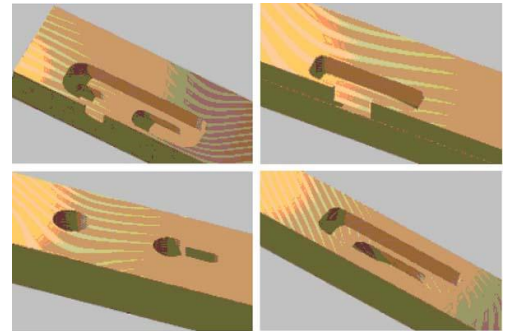
MASTERWORK ALSO ALLOWS THE USE OF ALL THE TYPICAL CAD FUNCTIONS: HOOKING, OFFSET, SCALE, ROTATE, RADIUS, BEVEL AND MANY OTHERS.

DETAILS

- GRAPHIC BORING - ROUTING AND CUTTING PROGRAMMING
- BORING CYCLE OPTIMIZATION
- REALISATION OF PROFILES AND PARAMETRIC DRAWINGS
- TOOLS CONFIGURATION (MACHINE SETTING - TOOLS EDITOR)
- GRAPHIC BASIC MACROS FOR SIMPLE AND COMPLEX ELABORATIONS
- GRAPHIC VISUALISATION OF THE SURFACES TO BE MACHINED
- IMPORTING OF DXF FILES GENERATED BY CAD SYSTEMS OR BY COMMERCIAL PROGRAMMES FOR FURNITURE PROCESSING
- AUTOMATIC CONVERSION OF DXF FILES INTO ISO PROGRAMMES

PRE DEFINED MACROS:

TO CARRY OUT PARTICULAR GEOMETRIES IT IS POSSIBLE TO USE PRE DEFINED GRAPHIC MACROS. IT IS ALSO POSSIBLE TO REALIZE PERSONALISED MACROS FOR DEDICATED ALGORITHMS DIRECTLY IN ISO ENVIRONMENT AND THEN, RECALLING THEM IN GRAPHIC ENVIRONMENT, DEFINE THE MACHINING PARAMETERS



DXF FILES IMPORT:

IT IS POSSIBLE TO MODIFY AND MAKE DRAWINGS IN DXF FORMAT CONTAINING THE TECHNOLOGICAL INFORMATION. OBVIOUSLY, BY IMPORTING DXF FILES, MASTERWORK IS OPEN TO ALL THE VARIOUS PROGRAMMES ON THE MARKET.

FURTHERMORE, THIS FUNCTION ALLOWS THE PROGRAMMING OF THE MACHINE DIRECTLY FROM AUTOCAD WITHOUT FURTHER OPERATIONS.

MASTERWORK OFFICE VERSION

SAME FUNCTIONS OF MACHINE VERSION, BUT IT CAN BE USED IN THE OFFICE AS PROGRAMMES GENERATOR AND AS SINGLE PROGRAMMING STATION FOR ALL THE MASTERWOOD'S MACHINES. N. 1 HARDWARE SAFETY KEY INCLUDED.

O0000HSC N. 1

HSC SOFTWARE PLUGIN MODULE
SOFTWARE PLUGIN MODULE FOR COMPLEX ROUTING OPERATIONS AT HIGH SPEED
HSC (HIGH SPEED CONTROL).
IT ALLOWS A FLUID AND CONTINUOUS MILLING PROCESS, IMPROVING THE
FINISHING RESULT AND AXIS DISPLACEMENT SMOOTHENESS ON COMPLEX
GEOMETRIES GENERATED BY ADVANCED COMMERCIAL CAD/CAM SOFTWARE.

O00M3DLEV3 N. 1

MASTER 3D LEVEL 3
MASTER 3D IS THE CAD/CAM SOFTWARE SOLUTION FOR WOOD AND
SIMILAR MATERIALS WORKING INDUSTRY BY
NUMERICALLY CONTROLLED MACHINING CENTRES.
MASTER 3D IS COMPLETE AND FULLY MANAGES THE WOODWORKING PROCESS:
FROM DESIGN TO DISPOSITION OF PIECES AND UNDERPIECES ON THE BENCH,
3D AUTOMATIC COLLISION DETECTION WITH SIMULATION,
MACHINING OPTIMIZATION AND PROGRAM GENERATION.

THE CONTRACT INCLUDES :
- TELEPHONE AND E-MAIL HELPLINE FOR A PERIOD OF 12 MONTHS DURING
WORKING DAYS FROM 08:30 TO 12:45 AND FROM 14:00 TO 17:45 ACCORDING
THE ITALIAN TIME ZONE AND CALENDAR.
HELPLINE IS PROVIDED IN ITALIAN OR IN ENGLISH
- SOFTWARE UPDATING AVAILABLE THROUGH YOUR PERSONAL AREA

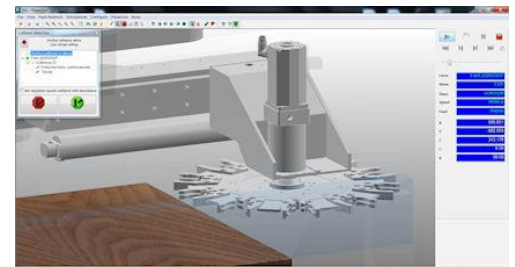
MASTERWOOD SPA RESERVES THE RIGHT TO DELEGATE THE ASSISTANCE CONTRACT
TO A THIRD PARTY.

O00M3DOPT1 N. 1

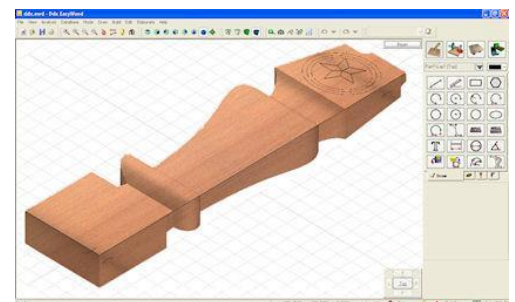
3 D COLLISIONS DETECTION WITH WOODEN PIECES AND TOOLING
OLY FOR MASTER 3D LEVEL 2 AND 3

THE CONTRACT INCLUDES :
- TELEPHONE AND E-MAIL HELPLINE FOR A PERIOD OF 12 MONTHS DURING
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HELPLINE IS PROVIDED IN ITALIAN OR IN ENGLISH
- SOFTWARE UPDATING AVAILABLE THROUGH YOUR PERSONAL AREA

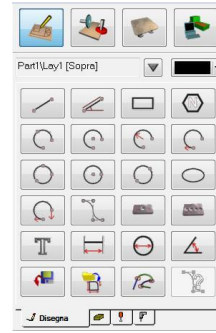
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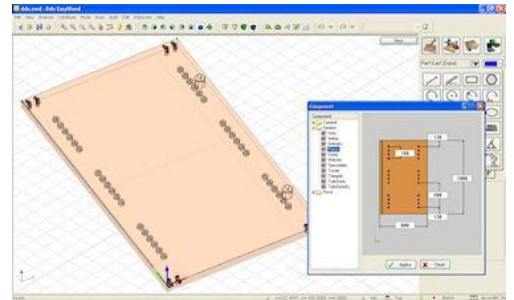
3D GRAPHICS AND PHOTO-REALISTIC RENDERING OF THE PROJECT



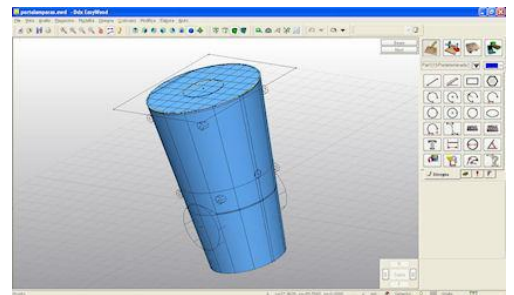
FREE DESIGN AND MEASURES OF GEOMETRICAL ENTITIES
(ARCS, BI-ARCS, LINES, RECTANGLES, SQUARES, ELLIPSES,
CIRCLES, REGULAR POLYGONS, FILLETS, CHAMFERS, CONSTRUCTION PLANS,
NURBS, ETC.)



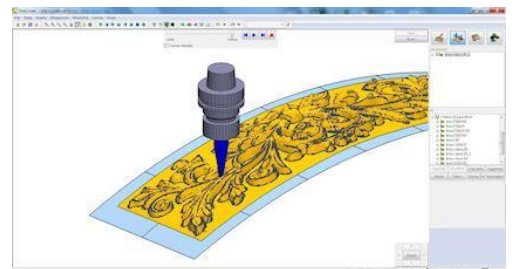
DESIGN FROM PREDEFINED PARAMETRIC MODELS IN LIBRARY:
VANITY TOPS, KITCHEN TOPS, OPENINGS, TABLES, ETC.



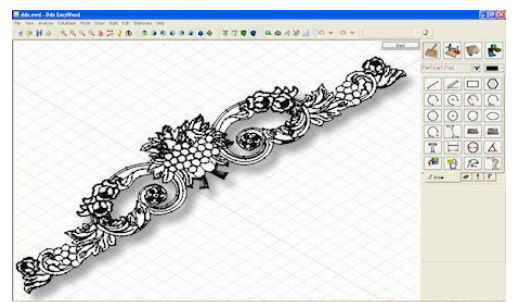
DESIGN OF 3D SURFACES:
COLUMNS WITH FIXED AND VARIABLE SECTION/TORSION, LOFT,
SWEPT, GORDON, POLYMESH AND SURFACE DRAWING FROM CURVE GRID



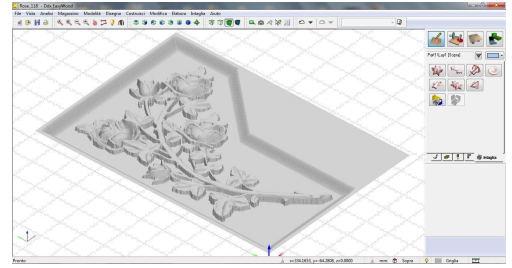
SURFACE DEFINITION BY LASER SCANNING



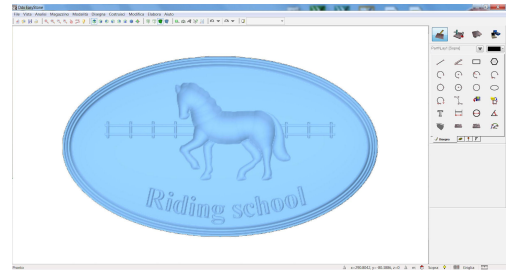
DXF, CAL, HPGL, TNT, ISO, IGES, STL, STEP, SAT AND 3DM
(RHINOCEROS) IMPORT



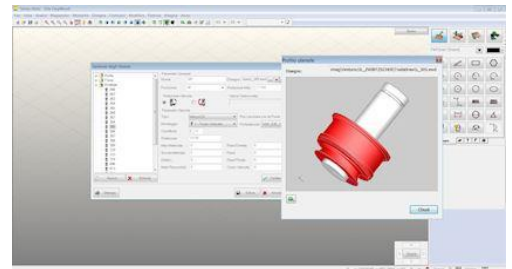
PICTURES VECTORIALIZATION AND ZMAP:
BMP, JPG, DIB, PCX, TGA



ART MODULE



GRAPHIC TOOL DATABASE, CUSTOMISED PROFILED TOOLS AND TOOL HOLDE



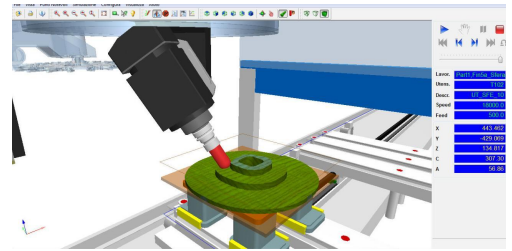
4 AXIS INTERPOLATED MANAGEMENT
WITH THE POSSIBILITY TO ADD TWO AXIS MORE

5 AXIS INTERPOLATED MANAGEMENT
WITH THE POSSIBILITY TO ADD ONE AXIS MORE

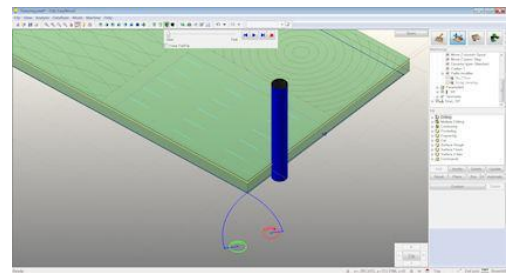
RECESS, RELIEF MACHINING AND SHARP-EDGED ENGRAVINGS



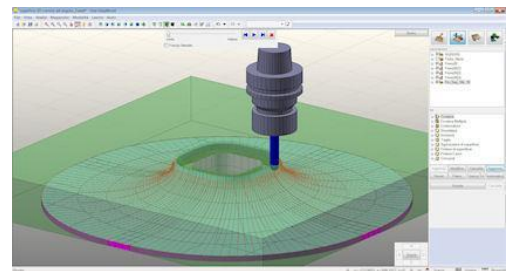
CUTTING CYCLES BY BLADE OR TOOL, DRILLING, FINISHING, PROFILING, POCKETING, CONTOURING



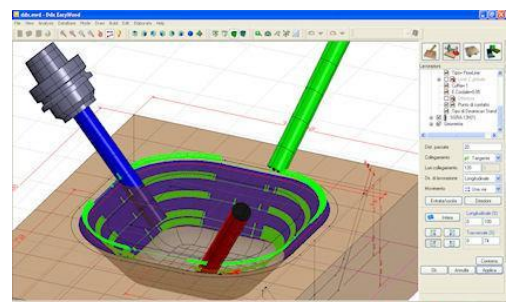
AUTOMATIC GENERATION OF LEAD IN AND LEAD OUT PATHS WITH GRAPHIC MODIFICATION



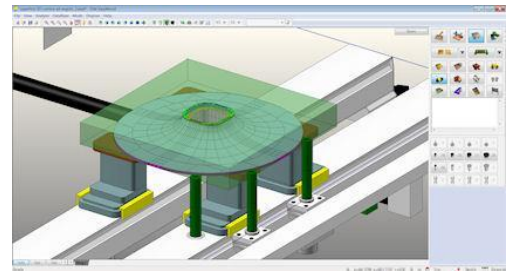
ROUGHING MACHINING AND SURFACE FINISHING
ONLY FOR MASTER 3D LEVEL 2 AND LEVEL 3



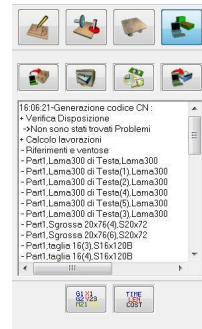
5 AXIS MACHINING WITH TOOLS AND BLADES:
SCALLOP, FLOW LINE, DEVELOP, PROJECTION, POCKETING
ONLY FOR MASTER 3D LEVEL 3



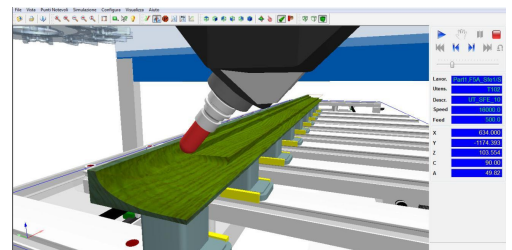
DISPOSITION OF PIECES AND SUB-PIECES
ON THE MACHINE WITH AUTOMATIC CHECK OF THE INTERFERENCES BETWEEN
THE MACHINING AND THE SUB-PIECES



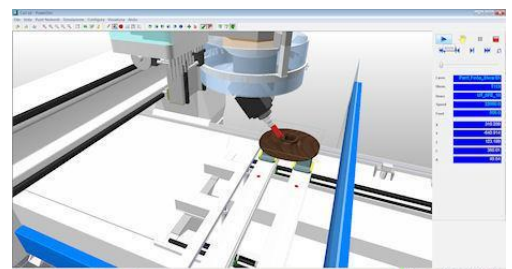
MACHINING TIME AND COST ESTIMATION
AND GENERATION OF PIECE PROGRAMS FOR CNC



VIRTUAL MILLING



GRAPHIC 3D SIMULATION OF THE MACHINING PROCESS:
IT IS DONE USING THE CNC MACHINE 3D MODEL WHICH
REPRODUCES THE TABLE, THE MOTORS, THE TOOLS,
THE SUB-PIECES AND THE PIECES



OCOLM3DL3F N. 1

INSTALLATION OF MASTER 3D LEVEL 3
THE INSTALLATION OF MASTER 3D CONSISTS IN THE TESTS ONBOARD THE CNC
MACHINING CENTER OF ONE OR MORE PIECES PREVIOUSLY DEFINED
WITH MASTERWOOD.
THE TRAINING ON THE SOFTWARE, IF INCLUDED, FOLLOWS
THE PROGRAM HERE BELOW:

- # DESIGN:
 - MASTER3D CAD INTERFACE (SELECT, HOW TO CREATE AND MODIFY A LAYER, ECC.);
 - 2D DESIGN: DRAW AND MODIFY 2D ELEMENTS, IMPORT OF 2D FORMATS (DXF, ECC.);
 - 3D DESIGN: DRAW AND MODIFY 3D ELEMENTS, IMPORT OF 3D FORMATS (STL, IGES, ECC.), BASRELIEF (ZMAP);
- # MACHINING:
 - HOW TO DEFINE RAW PIECES AND UNDERPIECES (RECTANGULAR, OFFSET, SHAPED);

- HOW TO ADD A NEW TOOL (PARAMETERS ACCORDING TO TOOL TYPE, IMPORT OF TOOL DRAWINGS);
- HOW TO CREATE NEW KITS (PARAMETERS ACCORDING TO KIT TYPE, MODIFICATION AND AND SIMULATION FROM INTERFACE);
- HOW TO MODIFY THE AUTOMATIC CAM (HOW TO ADD/MODIFY AN ATTRIBUTE AND RELATED KIT, HOW TO CREATE/LOAD A NEW AUTOMATIC CAM);
- # DISP:
- MASTER3D DISP INTERFACE (RESET OF THE DISPOSITION, ADD/DELETE PIECE, ECC.)
- PIECE POSITIONING ON THE TABLE (MANUAL, AUTOMATIC, ECC.);
- CHECK OF INTERFERENCES;
- SETUP FILE MANAGEMENT (TOOL SETUP FROM HEAD, LOAD AND SAVE TOOLING FILE);
- MACHINING ORDERS;
- # GENERATION:
- HOW TO GENERATE PART PROGRAMS;
- NC CODE GENERATION, IF INCLUDED (HOW TO CHANGE TRANSMISSION PATH);
- MACHINE SIMULATION, IF INCLUDED;
- # PRINTOUTS;
- # HOW TO CONTACT OUR ASSISTANCE SERVICE IN CASE OF NEED.

ZONE "F": OTHER MEMBER OF THE WORLD NOT SPECIFICALLY MENTIONED

OBP00011 **N. 1**

- KIT FOR BASIC SAFETY PROTECTIONS :
- TOTAL TRANSPARENT ENCLOSURE OF OPERATING HEAD TO CHECK THE WORKING ZONE
 - DEVICES TO DETECT THE OPERATOR'S PRESENCE
 - SIDE AND REAR ANTI INTRUSION PROTECTIONS
- # KIT NOT IN ACCORDANCE WITH EC STANDARDS



OVING000 **N. 1**

INSTRUCTION MANUAL IN ENGLISH

OIMB0008C **N. 1**

- SEAWORTHY PACKING
- PALLET
 - MACHINE COVERED WITH SEAWORTHY NYLON

OCOLL00000 N. 1

ACCEPTANCE TEST AT MASTERWOOD PREMISES :

ANTICIPATED 5 DAYS : 3 DAYS FOR PREPARATION AND SETTING + 2 DAYS FOR TESTS WITH CUSTOMER.

WE FORESEETHE MANUFACTURE OF A STANDARD ONE WING (SASH) WINDOW (FRAME + WING - A TOTAL OF 8 PIECES) WITH CUSTOMER'S TOOLS AND TIMBER SAMPLES.

THE ACCEPTANCE TEST IS TO CONFIRM THAT THE CHARACTERISTICS AND THE COMPOSITION OF THE WORKING CENTER CONFORM WITH THE CUSTOMER'S ORDER. THE TEST HAS TO BE CONSIDERED AS ACCEPTANCE OF THE WORKING CENTRE AND THE CUSTOMER WILL HAVE TO SIGN AN ACCEPTANCE DOCUMENT.

AT CUSTOMER'S EXPENSE :

- TOOLS DISPATCH TO MASTERWOOD IN RIMINI (THREE WEEKS BEFORE ACCEPTANCE TEST)
- TIMBER SAMPLES DISPATCH TO MASTERWOOD IN RIMINI (THREE WEEKS BEFORE ACCEPTANCE TEST)
- TRIP COSTS, BOARD AND LODGING

AT MASTERWOOD'S EXPENSE :

- TEST ACCEPTANCE PREPARATION
- TEST ACCEPTANCE EXECUTION
- PREPARATION OF TECHNICIAN THAT WILL INSTALL THE MACHINE AT CUSTOMER'S PREMISES

OCOLLFE0G07 N. 1

INSTALLATION AND COMMISSIONING OF 7 WORKING DAYS (8 HOURS PER DAY, TRAVEL EXCLUDED)

TECHNICIAN'S TRAVEL, ACCOMMODATION AND MEAL EXPENSES ARE INCLUDED.

POSITIONING OF THE MACHINE:

ON ARRIVAL OF TECHNICIAN THE FOLLOWING IS REQUIRED:

- MACHINE POSITIONED IN ITS DEFINITIVE POSITION, ACCORDING TO THE LAYOUT SUPPLIED;
- MACHINE POSITIONED ON THE RELATED PLATES DELIVERED;
- MACHINE CONNECTED TO ELECTRIC AND AIR SUPPLY;
- MACHINE EQUIPPED WITH THE TOOLING NECESSARY FOR THE MACHINING TESTS

IF THE ABOVE MENTIONED CONDITIONS ARE NOT FULFILLED, MASTERWOOD WILL, AT ITS OWN DECISION, CHARGE YOU FOR THE WASTED HOURS IN WAITING OR RESETTING OF THE REQUIRED CONDITIONS, ACCORDING TO THE RATES IN FORCE.

LOADING AND UNLOADING UNITS NOT INCLUDED

TRAINING INCLUDED IN MACHINE PRICE:

MASTERWOOD OFFERS THE POSSIBILITY OF ATTENDING A TRAINING AT THE FACTORY IN RIMINI, REGARDING USE OF THE SOFTWARE AND MACHINE OPERATION. DUE TO ORGANIZATION REASONS THE TRAINING WILL BE LIMITED TO A MAXIMUM OF 2/3 PEOPLE EACH COMPANY, AND WILL BE FREE OF CHARGE (TRAVEL, ACCOMMODATION AND MEAL EXPENSES EXCLUDED).

(THE DATES OF THE TRAINING WILL BE COMMUNICATED IN DUE COARSE, WITH APPROACHING OF THE SCHEDULED DELIVERY TIME)

COMMISSIONING IN: EIRE-OTHER COUNTRIES (AIR FARE TICKET EXCLUDED)

O0000000 N. 1

SPECIAL EXECUTION

OGG00589

5 AXIS BIROTATIVE OPERATING UNIT "HEAVY DUTY"
ELECTROSPINDLE 16 KW LIQUID COOLED

- HSK-F63 CONE ATTACHMENT
- MAX.REVOLUTION SPEED 24.000 RPM
- "C" AXIS ROTATION +/- 360°
- "A" AXIS ROTATION +/- 108°
- LIQUID COOLING UNIT
- INVERTER "STATIC FREQUENCY CONVERTER"

SPECIAL EXECUTION

- TOOLS REVOLUTION SPEED NC CONTROLLED
- AUTOMATIC CONTROL OF TOOL BREAKING FUNCTION
- PROTECTION AGAINST CURRENT AND TENSION OVERLOAD AND SHORT CIRCUIT
- TROUBLES DIAGNOSTIC VISUALISED ON DISPLAY

O0000000 **N. 1**

SPECIAL EXECUTION

UPS MODULE FOR ELECTRICITY CUT DOWN SAVING COMPUTER PROGRAMS , operator has a time limit of 2 minutes to save programs from electricity cut down

O0000000 **N. 1**

SPECIAL EXECUTION

OPTKT0028K KIT AIR CONDITIONER for the electrical cabinet in order to keep constant internal temperature

O0000000 **N. 1**

SPECIAL EXECUTION

SPECIAL EXECUTION
O0000000
ADDITIONAL ITEMS : INCLUDED
NR 8 CONES HSK 63 F cones
Nr 4 CHUCKS diam 20mm
Nr 2 chucks diam 16mm
Nr 2 chucks diam 10mm
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O0000000 **N. 1**

SPECIAL EXECUTION

SPECIAL EXECUTION
O0000000
COMPUTER OPERATING SYSTEM
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WINDOW 7 BASE OPERATING SYSTEM