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COMI Worldwide



The Group

COMI is established in 1973 with the aim of designing and producing thermoforming industry.

After more of 50 years of activity, today COMI is a solid industrial reality, with more than 3.500 systems installed in over 50 countries all around the world, a top-level reference list and a brand among the most prestigious in its market. Today the Group presents itself as a reference player in the industrial sector with 6 production sites in Italy and 4 foreign sales offices. The companies that are part of the Group are: **COMI**, specialized in the production of thermoforming machines, presses, cutters and waterjets; **AMUT COMI**, today **COMI Packaging**, specialized in packaging thermoforming machines; **COMI TÈAS**, today **COMI Automation**, specialized in automation and laser cutting systems; **COMI Aerospace**, a company that recently joined the Group, specializing in the design and production of aircraft seats; **ACS World**, partner company specialized in the sale of spare parts in the aviation sector.

Facts & Figures







Manufacturing facilities in Italy



Subsidiaries abroad



Milion euro revenues



of Sales from international markets

5%

Invested constantly in R&S





Machines installed globally

Key Sector

Automotive



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The strong know-how of TechMill division makes it the ideal partner when high customization is required.

TechMill is a division of COMI Group which offers a complete range of CNC machining centers for machining of a wide range of materials.

Labor milling centers range is dedicated to the machining of plastic materials, glass fiber, carbon fiber, composites, up to aluminum and light alloys.

Ventor is instead the high performance milling centers range dedicated to machining of metals, from aluminum up to special steels and titanium. The range consists of 12 models, specifically developed to match application requirements, size of the working piece, production needs in automotive, aerospace, molding, marine, railway, industrial, appliances.

All machines are designed according to the most restrictive international standards in terms of safety for the operator and protecting the environment.



SELECTION CRITERIA

LaborMix		COMPOSITES	PLASTICS	RESIN	MOOD	MUINIM	LIGHT ALLOYS	AEROSPACE	AUTOMOTIVE	MARINE	RAILWAY	DNIM	MOLD	INDUSTRIAL
X: 2.500 - 6.100 mm Y: 1.500 - 3.100 mm Z: 900 - 1.200 mm	2,2 / 12 kW 18.000 - 32.000 rpm	~	⊘	~	~				0		~			~
X: 3.200 - 6.200 mm Y: 2.000 - 2.600 mm Z: 900 - 1.200 mm	10 / 12 / 15 kW 24.000 rpm	0	~	~	~	~			~		~		~	0
X: 2.600 mm Y: 1.500 - 1.700 mm Z: 1.000 - 1.200 mm LaborMidi	15 / 22 kW 24.000 rpm	0	~	~		0	0	0	0				~	~
X: 3.000 - 12.000 mm Y: 1.500 - 2.000 mm Z: 250 - 600 mm	22 kW 20.000 rpm		~		~	©							~	•
X: 2.000 - 6.000 mm Y: 2.000 - 3.000 mm Z: 900 - 1.500 mm LaborWind	22 / 30 / 42 kW 18.000 - 24.000 rpm	~		~		0	0	~					0	0
X: 6.000 - 50.000 mm Y: 4.000 - 8.500 mm Z: 1.200 - 4.500 mm LaborMarine	15 / 22 kW 20.000 - 24.000 rpm	0		~	~	~		~		~		0		
X: 4.000 - 50.000 mm Y: 2.600 - 8.000 mm Z: 1.200 - 3.000 mm LaborSpace	10 / 15 / 22 kW 20.000 - 24.000 rpm	0		~	~	~			~	⊘				
X: 10.000 - 20.000 mm	10/15/22 kW			~			~							

LABORMIX

LaborMix is a 5 interpolated axis milling center specifically designed for the machining of plastic and composite materials.

Equipped with working head with spindle at two opposite exits or four independent spindle head, it is the best solution for three-dimensional trimming of thermoformed parts. With working head with spindle and automatic toolchanger, it is instead widely used for the machining of small resin and wood models.

LaborMix allows to achieve very high productivity results and quality in trimming operations, with modeling capability.

AXIS STROKES		SPEED
х	2.500-6.100 mm / 98-240"	80 m/min
Υ	1.500-3.100 mm / 59-122"	80 m/min
Z	900-1.200 mm / 35.4-47.2"	40 m/min
A (*)	+/- 120°	30 rpm
C (*)	+/- 365°	30 rpm

NUMERICAL CONTROL

Siemens

ELECTROSPINDLE

Double opposite exit	2,2 kW
Revolver at 4 stations	24.000 / 32.000 rpm

TOOLS MAGAZINE

Linear

from 8 pos.

840 D SL





LABORMAX

LaborMax is an extremely versatile working center capable to satisfy the milling requirements on a wide variety of materials, with characteristics which made it the best solution for composite materials working operations.

Available in several standard dimensions and versions, with fixed, rotary (pallet changer) or extractable tables, with different power working head, with linear or rotary tool magazines.

LaborMax is distinguishing for the great versatility, the wide possibility to furthermore complete the machine with auxiliary devices, the stiffness of the structure, for whole technical characteristics which position it at the top of its category.

AXIS STROKES		SPEED
Х	3.200-6.200 mm / 126-244"	80 m/min
Υ	2.000-2.600 mm / 78-102"	80 m/min
Z	900-1.200 mm / 35.4-47.2"	40 m/min
A (*)	+/- 120°	30 rpm
C (*)	+/- 365°	30 rpm

NUMERICAL CONTROL

Siemens

840 D SL

ELECTROSPINDLE

10 kW	24.000 rpm
12 kW	24.000 rpm
15 kW	24.000 rpm

TOOLS MAGAZINE

Linear	from 8 pos.
Rotating	from 12 pos.







LABORMAC

LaborMac is a 5-axis machining center specifically developed to optimize the machining of molds and parts in aluminum and composite. The extreme rigidity provided by the monolithic structure with Gantry type mobile portal on the Y axis, significantly limits the vibrations helping to achieve very good quality even at high speeds.

LaborMac version "C" offers instead high performance in modeling and trimming of composite materials and resins, can be equipped with Oil Mist and suction hood for dust extraction.

The version "A", dedicated to aluminum machining, is equipped with a working head of higher robustness, tool's cooling system by chemical water, steel table with T-slots and two chips conveyors.

AXIS	STROKES	SPEED
Х	2.600 mm / 102.4"	80 m/min
Υ	1.500-1.700 mm / 59.1-67"	80 m/min
Z	1.000-1.200 mm / 39.4-57.2"	60 m/min
A (*)	+/- 120°	30 rpm
C (*)	+/- 365°	30 rpm

NUMERICAL CONTROL

Siemens	Heidenhain
ELECTROSPINDLE	
15 1/\//	24.000 mm

15 kW	24.000 rpm
22 RW	24.000 rpm
Linear	from 8 pos.
Rotating	from 10 pos.









LABORMIDI

LaborMidi has been specifically designed to machine aluminum, policarbonate and technical polymers.

Its "open" configuration with mobile bridge allows a wide access from the 2 sides of the machine, but also allows to be used in totally automated production systems which require automatic loading/unloading by robotized devices. Available in the 3 and 5 axes version, it can be equipped with a wide range of accessories according to customer needs.

LaborMidi is an effective solution for panel machining with a very good quality/price ratio, extremely easy to install and introduce in the production process.

AXIS	STROKES	SPEED
х	3.000-12.000 mm / 118-472"	80 m/min
Υ	1.500-2.000 mm / 59-78"	80 m/min
Z	250-600 mm / 9.8-23.6"	40 m/min
A (*)	+/- 120°	40 rpm
C (*)	+/- 365°	30 rpm

NUMERICAL CONTROL

ELECTROSPINDLE

3 Axis working head

Siemens

22 kW 20.000 rpm

Fanuc

TOOLS MAGAZINE

Rotating

from 10 pos.







LABORSHAPE

LaborShape is a 5 axis machining center specifically designed for high speed machining on aluminum and light alloys.

Compact dimensions and extremely rigid monolithic structure, axis displacement with recirculating ball screws and magnetic linear guides to ensure the best accuracy, working head with torque motors are the main technical features which makes this model the best solution for high chip removal.

LaborShape is the best answer to the working requirements for mould in aluminum or light alloys, whereas accuracy and quality of finishing are requested.

AXIS STROKES		SPEED
х	2.000-6.000 mm / 78-236'	80 m/min
Υ	2.000-3.000 mm / 78-118"	80 m/min
Z	1.250 mm / 49.2"	80 m/min
A (*)	+/- 120°	40 rpm
C (*)	+/- 365°	40 rpm

840 D SL

NUMERICAL CONTROL

ELECTROSPINDLE

Siemens

22 kW	18.000 rpm
30 kW	20.000 rpm
42 kW	24.000 rpm

TOOLS MAGAZINE

Linear	from 8 pos.
Rotating	from 16 pos.







LABORWIND

LaborWind is the family of machining centers designed for those applications requiring the biggest working area, especially for the vertical "Z" axis.

The mobile crossbeam, "suspended" on lateral steel or reinforced concrete structures, allows to cover very large working areas without overload the basic structure of the machine. Available with various spindle power and tool magazine configurations, with longer longitudinal axis strokes versions the machine can also be supplied with double mobile crossbeam and independent working unit, thus to double the production capacity.

LaborWind is the solution for the machining of parts and models of wind turbines and yachts.

AXIS	STROKES	SPEED
х	6.000-50.000 mm / 157-334"	80 m/min
Υ	4.000-8.500 mm / 315-1968"	80 m/min
Z	1.200-4.500 mm / 47.2-177"	40 m/min
A (*)	+/- 120°	30 rpm
C (*)	+/- 365°	30 rpm
NUN	IERICAL CONTROL	
Siemens		840 D SL
ELEC	CTROSPINDLE	
15 k	W	24.000 rpm
22 k	W	20.000 rpm
тоо	LS MAGAZINE	
Line	ar	from 8 pos.
Rota	ting	from 10 pos.









LABORMARINE

LaborMarine allows to have an appropriate working area for large dimension parts milling, ensuring at the same time the maximum machine accessibility for loading/unloading operations. Although these are typical requirements of the marine sector model manufacturers, today this machine is particularly appreciated also from the foundry model makers.

Thanks to its mobile portal configuration, the machine can also be laterally loaded/unloaded, with clear advantages for the manufacturing space organization.

With Labor Marine the working area is exactly configurable according to the specific need, making the best use of the available space in the factory.

AXIS	STROKES	SPEED
Х	4.000-50.000 mm / 102-315"	80 m/min
Υ	2.600-8.000 mm / 157-1970"	80 m/min
Z	1.200-3.000 mm / 47.2-118"	40 m/min
A (*)	+/- 120°	30 rpm
C (*)	+/- 365°	30 rpm

NUMERICAL CONTROL

Siemens	840 D SL
ELECTROSPINDLE	

10 kW	24.000 rpm
15 kW	24.000 rpm
22 kW	20.000 rpm

TOOLS MAGAZINE

Linear

from 8 pos.





LABORSPACE

LaborSpace is a special CNC machining center which integrates the functions of a mobile portal milling machine with a rotating unit typical of a horizontal lathe, designed to perform machining of high dimension aerospace propulsion systems.

It is capable to machine aerospace solid motor cases up to 20 meters length by 5 meters diameter, made by advanced composites materials (carbon fiber and epoxy resin) protected by a rubber layer and equipped with aluminum flanges, which may reach 120 tons weight.

Laborspace capable to perform precisely on very wide, long and high strokes the three critical operations for that parts manufacturing process: the composite multilayer cutting, the light alloy flanges drilling and the external rubber machining.

AXIS	STROKES	SPEED
х	10.000-20.000 mm / 157-315"	30 m/min
Υ	4.000-8.000 mm / 394-788"	30 m/min
Z	3.000-6.000 mm / 118-236"	20 m/min
A (*)	+/- 120°	30 rpm
C (*)	+/- 365°	30 rpm

NUMERICAL CONTROL

Siemens	840 D SL
ELECTROSPINDLE	
10 kW	24.000 rpm
15 k/W	24.000 rpm

15 kW 24.000 rpm 22 kW 20.000 rpm

TOOLS MAGAZINE

Linear

from 8 pos.







PROCESS AND APPLICATIONS

PRODUCTION Mold

MATERIAL Aluminum

SECTOR Industrial



PRODUCTION Boat hull plug

MATERIAL Composite: glass fiber + resin

SECTOR Marine



PRODUCTION Luxury car extra-lightweight frame

MATERIAL Carbon fiber

SECTOR Automotive



PRODUCTION Models

MATERIAL Modeling paste

SECTOR Industrial, Automotive, Marine



MACHINE CONFIGURATION



2,2 kW (Dual-Bi)



MIX

10 kW







CUT

12 kW

MAX

ELECTROSPINDLE 15 kW

22 kW

24 kW

30 kW

42 kW

Tools magazine

Working Table





CAST IRON



ALUMINIUM



RANPREX



ROTATING



















STEEL

SELECTION CRITERIA

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VentorFast		MININI	LIGHT ALLOYS	STEEL	CASTIRON	TITANIUM	AEROSPACE	AUTOMOTIVE	MOULDING	MOLD MAKER	INDUSTRIAL
X: 2.000 - 6.000 mm Y: 1.500 - 3.000 mm Z: 1000 - 2.000 mm	18 - 50 kW 45 - 160 Nm 15.000 - 45.000 rpm	S	~	~	~	~	⊘	~		~	
VentorMaster											
X: 2.500 - 10.000 mm Y: 2.000 - 4.000 mm Z: 1.000 - 2.000 mm	11 - 105 kW 210 - 1.000 Nm 8.000 - 12.000 rpm	S	~	~	~	~		~	S	S	
VentorPower											
VentorPower X : 6.000 - 40.000 mm Y: 3.800 - 5.000 mm Z : 1.000 - 2.000 mm	11 - 105 kW 210 - 1000 Nm 8.000 - 12.000 rpm	~	~	~	~			~	~	~	O
VentorPower X : 6.000 - 40.000 mm Y: 3.800 - 5.000 mm Z : 1.000 - 2.000 mm LaborMidi	11 - 105 kW 210 - 1000 Nm 8.000 - 12.000 rpm	~	~	~	~	⊘		~	~	~	⊘



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VENTORFAST

VentorFast is a 5-axis machining center "portal" type with mobile bridge and fix working table, designed to obtain the maximum rigidity and the best resistance even under the most severe working conditions.

The vertical axis rigidity is guaranteed by movement performed along 4 guides within the "RAM" "box-in-box" structure.

The X/Y/Z axis displacement is obtained by dual drive gantry system, while the axes positioning accuracy is detected by optical lines.

The machine can be equipped with 5 axes continuous interpolation as well as with "Index" type heads.

VentorFast performs high speed machining and high accuracy processing of aluminum and steel, with proved successfull applications in the aerospace sector.

AXIS	STROKES	SPEED
х	2.000-6.000 mm / 78-236"	60 m/min
Υ	1.500-3.000 mm / 59-118"	60 m/min
Z	1.200-2.000 mm / 47-78"	40 m/min
A (*)	+/- 120°	30 rpm
C (*)	+/- 365°	30 rpm

NUMERICAL CONTROL

Heidenhain

ELECTROSPINDLE

10-65 kW	5.000-30.000 rpm
40-180 Nm	HSK-A 63

TOOLS MAGAZINE

Rotating

Siemens

from 24 pos.





VENTORMASTER

VentorMaster is a 5-axis machining center designed to obtain high torque needed to work on hard metals such as steel and titanium.

This machines have a fixed table and mobile transversal bar which runs along the X axis guides which are placed in the upper part.

The axes movements are on roller guides and screw rectified to double preloaded scroll, while the axes positioning accuracy is detected by optical lines. The movement of the vertical axis "RAM" occurs within a "box-in-box" structure.

Available 5 axis heads versions either with continuous interpolation or «Index» type. VentorMaster develops high torque and has an extremely robust structure, features which makes it particularly suitable for metal machining performed by molding companies and mold makers.

AXIS STROKES		SPEED
Х	2.500-10.000 mm / 98-394"	40 m/min
Y	2.000-4.000 mm / 78-156"	40 m/min
Z	1.200-2.000 mm / 47-78"	40 m/min
A (*)	+/- 120°	30 rpm
C (*)	+/- 365°	30 rpm

NUMERICAL CONTROL

Heidenhain

ELECTROSPINDLE

30-100 kW	5.000-30.000 rpm
150-1.000 Nm	HSK-A 100 (ISO 50)

TOOLS MAGAZINE

Rotating

Siemens

24 pos.





VENTORPOWER

VentorPower is a 5-axis machining center, portal type with mobile bridge and fixed table, equipped with advanced technological solutions capable to reach outstanding performances.

The axes movements are on roller guides and screws rectified to double spiral preloaded, the positioning accuracy of the axes is detected by optical lines, the RAM is "box in box" type.

Available also a "cross mobile" version with Z 1 Racing (RAM) up to 1800 mm and Z2 (bar) up to 4000 mm. Can be mounted both heads with 5 axes with continuous interpolation or "Index" type, additional option the «automatic head change» system.

VentorPower is a machining center for steel, cast iron, titanium and aluminum, suitable for industrial sectors such as Mechanical Fabrication.

AXIS STROKES		SPEED
Х	6.000-40.000 mm / 236-1575"	40 m/min
Υ	3.800-5.000 mm / 150-197"	40 m/min
Z	1.000-2.000 mm / 39-78"	40 m/min
A (*)	+/- 120°	30 rpm
C (*)	+/- 365°	30 rpm

NUMERICAL CONTROL

Siemens	Heidenhain
ELECTROSPINDLE	
30-100 kW	5.000-30.000 rpm

TOOLS MAGAZINE

Rotating

150-1.500 Nm

from 24 pos.





MONNALISA

Monnalisa is the innovative 5 axes horizontal working center specifically developed for the machining of monolithic aluminum structural parts of large dimensions, particularly suitable for applications in the aeronautical sector.

The extremely robust structure is made entirely of cast iron and properly reinforced to obtain maximum rigidity and dynamicity with minimal thermal drift.

The tables are two large worktops, symmetrical to each other (pallet changer) in order to allow the operator to replace the pieces during the processing phases, in a comfortable position and in full safety.

AXIS STROKES		SPEED
х	2.000-6.000 mm / 78-236"	50 m/min
Υ	2.000 mm / 78'	50 m/min
Z	1.000-2.000 mm / 39-47"	50 m/min
A (*)	+/- 110°	210%sec
C (*)	+/- 200°	210%sec

TILTING TABLE

From vertical to horizontal positioning 90° standard

ELECTROSPINDLE

90 kW	30.000 rpm
29 Nm (S1)	HSK-F 80

TOOLS MAGAZINE

Chain

from 60 pos.







MONNALISA

The aluminum work tables are designed to use both the vacuum suction that any fixing system for the piece, with a flow rate of 2,000 kg for each floor.

The piece loading is made simple by the rotation of the table of 90 ° obtained with two mechanical arms hydraulically actuated, while for gripping the table four hydraulic pistons are used.

The large capacity tool's magazine allows to have more than 100 tools, it is positioned laterally and is properly protected from chips and dust when not used. Thanks to the large size tape evacuator positioned below the work surface, a volume of 1 cubic meter of chips per hour is evacuated. The X carriage is made by a rigid structure to double upright in cast iron and is moved by 4 gear-boxes with integrated pinion and 4 brushless motors. The scheme is a gantry of two Dual Drive systems for the recovery of the games via electronic preload.



Bulkhead - Alluminum 7040 966 x 1347 x 178 mm - 38.5 x 53 x 7" 400 Kg > 7,5 Kg in 6- hours



Windshield - Alluminum 7475 2540 x 1067 x 50 mm - 100 x 42 x 2" 700 Kg > 12 Kg in 20- hours

Comi Group 🗿 Comi Group in COMI spa

THERMOFORMING

METAL SHEET



CNC MILLING



ENGINEERING



GROUF

PRESSES



LASER CUT



AUTOMATION





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