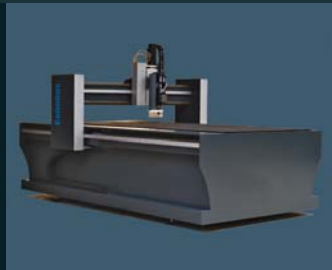


# CIR and CLR series

Advanced flatbed CNC routers for maximum productivity

Multifunctional, powerful and extremely simple to use

Unmatched performance and versatility



**Colinbus**<sup>®</sup>  
Technology for everyday applications

# Welcome to the world of Colinbus



I am naturally very pleased that you are interested in our machines. This brochure presents the popular CIR series and the fully updated CLR series. These machines meet the needs of a target group that is ignored by many machine manufacturers: true specialists who have done everything by hand up to now, but who are interested in switching to CNC due to economic pressure. I would be pleased to invite you to visit us for a demonstration – you will be amazed at what these machines can do for you. The coffee's waiting!

Frank Jacops  
Managing Director

Moving with the times, or better yet, always trying to be ahead of our time. Building machines that do just a bit more or are just a bit better – this is what customers expect of a modern machine builder. Colinbus was the first company to apply Stealt technology to machine tools, the first company to build a machine for users who are not trained machinists, and the first company to develop a technology for producing affordable large-format machines. Thanks to our enthusiastic employees, our extensive experience and our drive for innovation, this brochure boasts several unique machines. Machines that can increase the profitability of your company without chewing a hole in your budget.

## User-friendly

At trade fairs and conferences, you often hear the remark, “Colinbus is a CNC machine for companies that don't have any machinists on the payroll”. That's true, and it is a statement that we are proud of. It was no easy task to develop software that lets completely inexperienced users make products that previously could only be fabricated by professional machinists. Of course, this is all possible thanks to the wonderful CAD packages that are currently available on the market. In every production company or development enterprise, there is bound to be someone in the organisation who can use such a package. The only thing the development engineers at Colinbus had to do was to transfer this highly professional simplicity to the machine. And they have certainly succeeded.



## Customer service

Colinbus guarantees exceptionally reliable machines. If any technical problems nevertheless arise, you can count on an extensive service package as described below.

**Hotline support:** The basic requirements that Colinbus fulfils are a user-friendly operator interface, sound user instructions, and quality training. If you still have questions, you can count on our hotline support. Our expert employees will help you find a solution. This service is provided by telephone or e-mail in six different languages. Thanks to the built-in remote service module (RSM), technical problems can be resolved without an on-site visit. Our specialists can test our machines regardless of how far away they are. This service saves our customers a lot of money and results in faster solutions to their problems.

**Replacement parts and repairs:** The Colinbus parts service guarantees the highest availability and the shortest delivery time. This is possible because Colinbus is one of the few manufacturers that makes nearly all of its own parts. Mechanical components, electronic components and software: they

all come from the same plant. If the RSM service cannot resolve a problem, skilled technicians are available for an on-site service call to clear up the problem. We provide telephone support to companies that have their own maintenance departments, to assist them in identifying and replacing defective components.

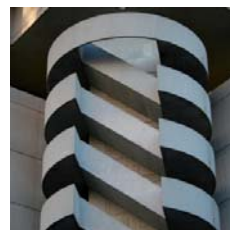
**Maintenance contracts & upgrades:** A tailored maintenance contract helps reduce the chance of machine outage. The likelihood of production interruptions is reduced considerably by regularly scheduled preventive maintenance.

All Colinbus machines can be remodelled or fitted with additional options, even if the machine has already been in service for several years. For example: faster controllers, improved drive systems, or higher-performance software.

**Experience on tap:** Colinbus has several experienced machinists among its employees. Our customer support includes not only technical support, but also advice. If you have any problems with machining materials, the Colinbus team is ready to help.



# Applications



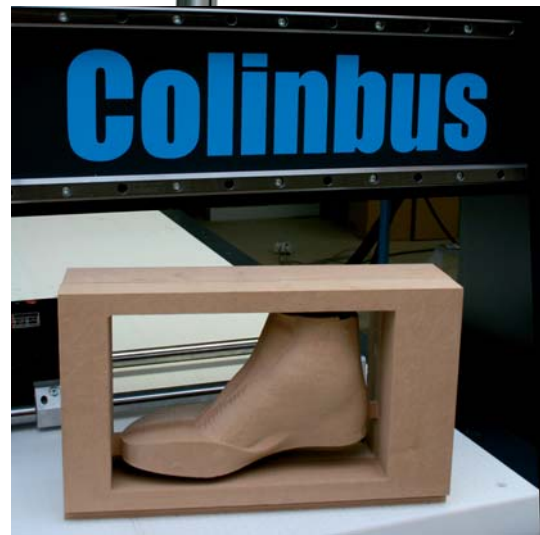


## Software

The CIR series is supplied with ColiDrive Professional, a program specifically developed for non-machinists. Now operating a CNC machine is child's play, and your creative opportunities are unlimited. You only have to import the drafted design, generate the milling paths, and let ColiDrive do the rest. The development environment included with the program can be helpful if you use the machine for special applications. Thanks to the open architecture, it is very easy to create your own applications. In exceptional cases, Colinbus engineers can write a suitable postprocessor.

## AC servo or hybrid motors?

Colinbus can supply the CIR machines with a choice of AC servo or hybrid motors. Both types have their advantages and disadvantages. An AC servo system is distinctly more expensive because it has a much more complex structure. The major advantage of a servo system is position certainty, since highly accurate encoders constantly read the position of the machine and feed this information to the controller. Hybrid motors are instructed by the controller to go to a particular position, but they do not provide any feedback, which naturally harbours a risk. This risk is quite small with relatively small machines, especially because Colinbus designs its drives with a generous safety margin. Hybrid motors are very powerful at low speeds, but AC servo motors have better dynamic characteristics. Is the price difference justifiable? The answer depends on the application and the available budget.



## CIR extended

The machines in the Extended series are built using the same principles as the regular CIR machines. However, they are made with sturdier profiles and a dual drive system in the Y axis, and the construction of the bridge is more robust. The machines in this series are always supplied with a full enclosure, and the standard height of the Z axis is 220 mm.

## Suitable for installation everywhere

Is your location inaccessible? No problem! The CIR machines can be assembled on site. Their low cost, high precision and stability make these machines suitable for use in laboratories, education, and innumerable tasks in industry.

## CIR series

The economical X/Y/Z tables are stable and accurate, which is why they are used worldwide for a wide variety of tasks. These machines are built with extruded profiles that are surface-milled before anodisation. You can choose between hybrid and servo motors for the drive systems. Thanks to precise dual-rail guides and ball lead screws, these machines are also suitable for fine work. However, they are equally capable of milling 2-cm aluminium when fitted with a suitable spindle.

CIR machines are available with workspace dimensions of 500 x 530 mm to 1420 x 2520 mm (maximum). They are suitable for 3D modelling, and for this reason they are available with an especially high Z axis.

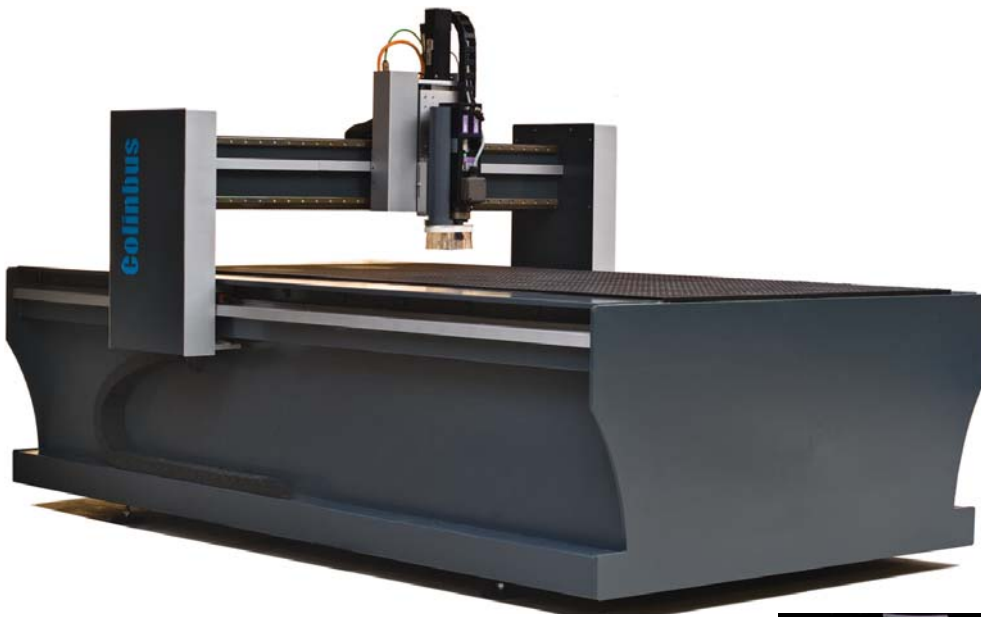


### Applications

- Milling, drilling and engraving
- Measuring and inspection
- Gluing and filling
- 3D shaping and modelling
- Soldering and welding
- Sawing and cutting
- Parts placement and assembly
- Dozens of other applications

### Technical data

- All machines are fitted with a T-slot table as standard. This table is constructed from surface-milled aluminium profiles. Workpieces can be secured easily using clamps. Vacuum tables are also available as optional accessories.
- Hybrid motors ensure high accuracy and high power along with high safety. They also guarantee a long service life and high holding torque. Servo systems, which are more expensive, provide better dynamic characteristics and more power. This is less important with relatively small machines, but it is certainly worth considering with larger models.
- All axes have precise lead screws instead of noisy toothed racks. They are fitted with high-precision ball nuts with a repeat accuracy of 0.01 mm.
- All axes have dual linear guides, adjusted for zero play and providing low-noise operation.
- Fitted with reference switches to ensure precise repositioning. Accuracy approximately 0.01 mm
- Built with extruded aluminium profiles produced specifically for this purpose. This ensures low weight and high stiffness.
- The smaller machines are available as table-top models, with a stand, or fully enclosed. The large machines are available as open floor-standing models or fully enclosed and fitted with safety devices (see photo).
- Zero-maintenance construction ensures that the machine still looks like new even after many years of use.
- The hybrid and servo controllers are both fitted with digital and potential-free inputs and outputs. Software control of the spindle, vacuum table, dust extractor, dispenser, or any other type of equipment can be implemented easily.



## Software

The Colinbus CLR machines are supplied as standard with a professional CAM program and a user-friendly operator interface. The interface is compatible with all known commercial CAM packages. Most CNC machines require a certain amount of professional knowledge, but the Colinbus machines can be operated by non-experts. Users need not have any contact with the CNC code if they do not want to. Everything happens in the familiar Windows environment, and the machine is operated by buttons with clearly defined functions. You see the work table of the machine on the computer screen, just as you see it when you stand in front of the machine. This makes positioning and working the material extremely easy.



## State-of-the-art servo drive

The CLR machines are fitted with powerful servo motors. In the interest of safety, the power and speed of the drive are both limited. This minimises the load on the system, even for heavy work, which in turn ensures low maintenance and a long service life.

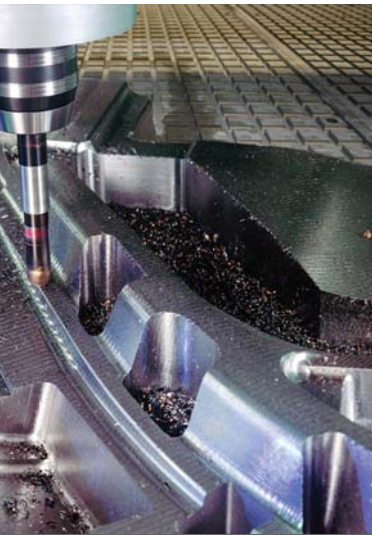
Colinbus machines operate with an integrated industrial processor instead of an ordinary PC. This processor ensures full stand-alone operation, and it is not dependent on unreliable operating systems. This also means that communication with these machines is trouble-free and reliable. All interpolations are performed in the machine, which eliminates errors, reduces response times, and increases resolution.

## Driving system!

Large versatile routers use ball lead screws or rack-and-pinion. Both systems do have their advantages and disadvantages. Contrary to other CNC machines Colinbus CLR machines are not made with one specific target group in mind. Therefore disadvantages could not be accepted. The machine had to be fast, precise, solid and low-noise. All this could only be achieved by developing new technologies. The new CLR machines use special gear drives that are controlled continuously by means of the software. This way it is not only possible to mill "hardboard" at high speed but to do fine engraving work as well.

# CLR series

The new CLR series is built in full accordance with Stealt technology. Like many modern cars and aircraft, these machines are constructed from a combination of steel and aluminium. Each of these metals has its specific advantages, and they create unprecedented opportunities when combined in a suitable manner. Steel provides the appropriate mass, while stress-free aluminium enables unprecedented acceleration and deceleration. Although more and more manufacturers are using this technology, Colinbus is the first to introduce a Stealt machine in this price class. Thanks to this construction method, the CLR machines can be used for many applications – not only for relatively heavy milling work, but also delicate work such as a fine engraving job.



## Applications

- Machining light metals
- Machining fibreboard
- Machining plastic sheets
- Machining wood
- 3D modelling
- Engraving
- Sawing and cutting
- Measuring and checking
- Dozens of other applications

## Technical data

- Colinbus CLR machines can be fitted with a T-slot table or a vacuum table. Vacuum tables can be ordered as perforated or gridded models according to the application.
- All CLR machines are supplied as standard with servo drive. Powerful AC servo motors provide outstanding acceleration and deceleration characteristics, which give the machine excellent dynamic performance.
- The unique driver system guarantee smooth run and high precision. Despite its large size, a CLR machine can also be used for fine machining. Colinbus developed a revolutionary system to make this possible.
- All axes are fitted with dustproof linear guides. The carriages can handle forces up to 20 times the actual weight of machine. As a result, the CLR machines have an exceptionally long service life and require little maintenance.
- The CLR machines are built entirely in accordance with Stealt standards. This provides a stable construction with good dynamic characteristics.
- All machines are supplied with ColiDrive, a unique user interface that makes it possible for anyone to operate the machine. Hundreds of customers without any previous knowledge have managed to mill their desired products within an hour.
- An extensive range of spindles is available, with or without automatic tool changing. Direct tool exchange, ISO tapers and HSK toolholders are all possible. All spindles are driven under software control.
- All CLR machines can optionally be constructed with a high bridge and extended Z axis.

# Accessories and options

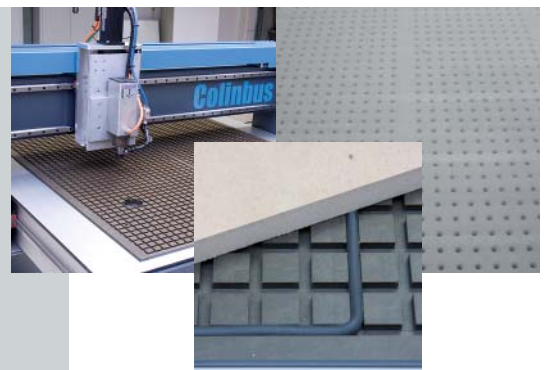


## Spindles

Colinbus offers an extensive range of spindle motors. Depending on the application, you can choose between high-rpm or low-rpm, manual or automatic tool changing, and high or low power. All of these motors have renowned brand names and are specifically made for intensive work. Our CNC specialists will be pleased to help you select a suitable spindle, because this choice determines the end result.

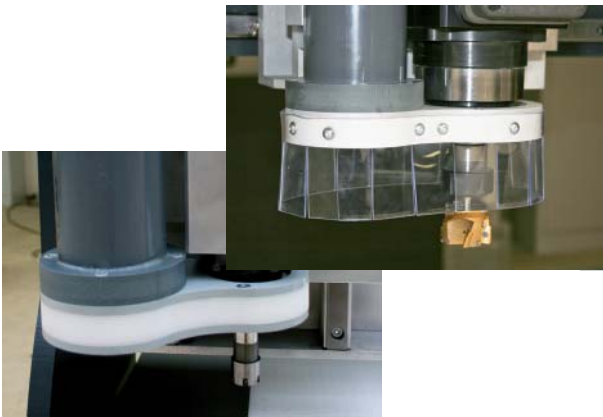
## Vacuum tables

Vacuum tables are optionally available for the CIR and CLR machines. The CLR machines can also be fitted with a vacuum table as standard. Depending on the application, you can choose from a perforated table or a grid table. Within certain limits, small workpieces can also be held securely on both type of tables.



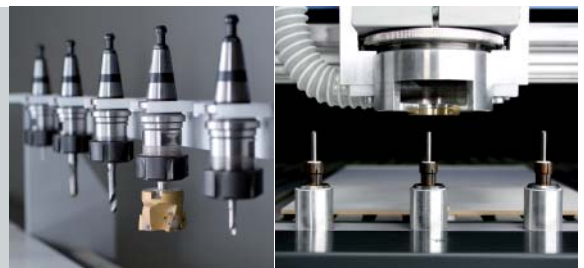
## Dust extraction

Dust extraction is not only important for our health, but also contributes to the quality of the end product. Among other options, Colinbus offers special dust extraction heads for 3D modelling, plastic and wood machining, and milling thin plates.



## Tool changing

When selecting a spindle, you have to decide whether a tool changer is desirable. This choice depends on the work to be performed. If you expect a lot of orders that require frequent tool changes, this is an essential option.



## Rotating axis

The machines can optionally be fitted with a fourth (rotating) axis. This A axis is primarily used for making 3D models or for engraving and milling round objects.

## Camera systems

Camera systems can be used for functions such as determining the position of the workpiece. This makes it very easy to set the zero point or enter new coordinates. You can also use the Colinbus camera systems for measuring, registration and inspection.

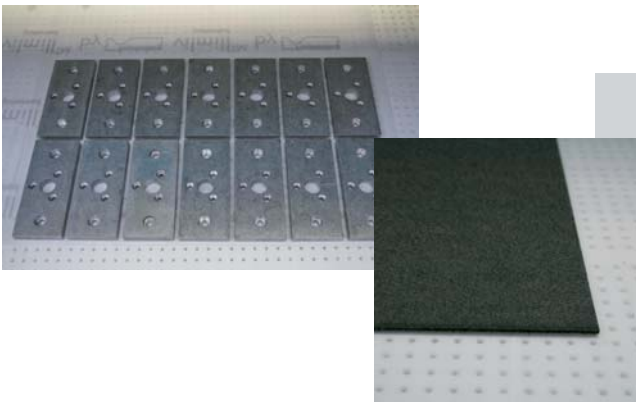


## Tools

Good tools are half the job – these are not idle words! Colinbus offers a broad spectrum of tools for machining aluminium, plastics and wood. Our selection reflects many years of experience. Advice is free, and the tools are of exceptional quality.

## Micro cooling systems

Machining material at high speeds is only possible if you use a good cooling system. With good cooling, you obtain much better results and have fewer problems. You can obtain the same results with a good micro cooling system as with a conventional fluid jet system, without the adverse side effects.



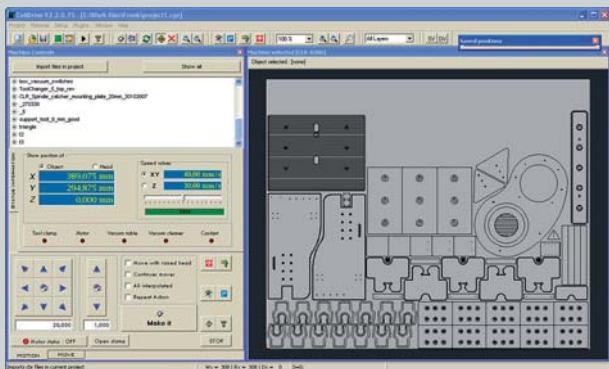
## Underlay material

Special mats and boards for vacuum tables. Our range of underlay material also includes plastic strips for protecting T-slot tables and magical sticky film for securing small workpieces. All of these materials can be indispensable for obtaining good end results.

## Miscellaneous

The profitability of a machine depends on the experience of the machinist and the tools he has available. Accessories and fittings that make the work much more pleasant, or which are simply necessary for obtaining good results, must be included in the annual budget. These accessories usually pay for themselves within a few months. The well organised Colinbus website and our extensive stock ensure that your needs will be satisfied.





# ColiDrive

Thanks to this software, operating a Colinbus machine is childishly simple. You see the machine table at the right side of the screen. This is where the drawings are loaded so you can see exactly where the workpieces are fabricated. Just about everything is controlled automatically from here, without any need for programming.

## Technical specifications – CIR machines

CIR- Extended series			
Model	Clamping Area	Working Area	Z-axis
CIR-520/E	625 x 1100	480 x 520	220/ 420
CIR-720/E	1125 x 1300	1020 x 720	220/ 420
CIR-1120/E	1125 x 1700	1020 x 1120	220/ 420
CIR-1120L/E	1500 x 1700	1420 x 1120	220/ 420
CIR-1620/E	1500 x 2200	1420 x 1620	220/ 420
CIR-2520/E	1500 x 3050	1420 x 2520	220/ 420

CIR - Standard series			
Model	Clamping Area	Working Area	Z-axis
CIR-500	850 x 750	500 x 530	160/ 260/ 460
CIR-750	1100 x 750	750 x 530	160/ 260/ 460
CIR-850	1350 x 1000	850 x 780	160/ 260/ 460
CIR-1250	1750 x 1250	1250 x 1030	160/ 260/ 460

Non-standard dimensions are not possible with the CIR series. The CIR Extended series is only available with an enclosure.

X/Y/Z drive	AC servo or hybrid motors
Working speed	Maximum 150 mm/s
Resolution	0,01 mm
Supply voltage	100 to 380 V AC, depending on drive and spindle
Data format	ColiDrive supports nearly all commercial CAM packages
Table type	Aluminium T-slot table
Preferred operating temperature	5–40 C (41–104 F)
Preferred relative humidity	35–80% (non-condensing)

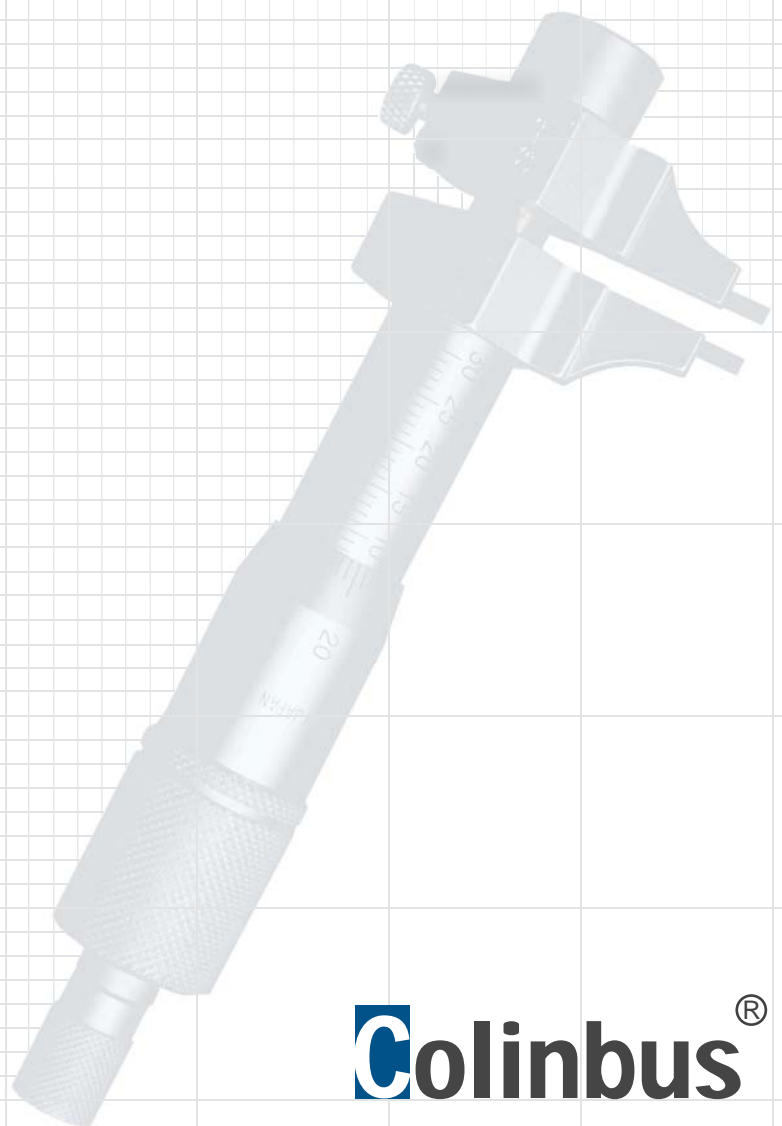
## Technical specifications – CLR machines

CLR-Standard series		
Model	Working Area X/Y in mm	Z-axis
CLR-1010	1000 x 1000	100 / 150/ 250
CLR-1510	1500 x 1500	100 / 150/ 250
CLR-2513	2500 x 1300	100 / 150/ 250
CLR-2520	2500 x 2000	100 / 150/ 250
CLR-3115	3100 x 1500	100 / 150/ 250
CLR-3120	3100 x 2000	100 / 150/ 250

The machines listed here are produced as standard models and thus have fixed dimensions. Non-standard dimensions are possible with the CLR series, but this affects the price. Some modifications are simple, while others are complex. A wide range of special configurations are possible, so please request additional information if the desired dimension is not listed.

X/Y/Z drive	AC servo motors
Working speed	Maximum 300 mm/s (600 mm/s)
Resolution	0,01 mm
Supply voltage	100 to 380 V AC, depending on drive and spindle
Data format	ColiDrive supports nearly all commercial CAM packages
Table type	Options: vacuum table (gridded or perforated) or T-slot table
Preferred operating temperature	5–40 C (41–104 F)
Preferred relative humidity	35–80% (non-condensing)

All technical data is indicative and subject to change without prior notice.



**Colibus<sup>®</sup>**



[www.colinbus.com](http://www.colinbus.com)

**Franklin Industries NV**  
Industriepark 62  
2235 Hulshout  
Belgium - Europe  
Tel.: +32/15/43.10.81  
Fax.: +32/15/43.00.85  
Email: [info@colinbus.com](mailto:info@colinbus.com)  
[www.colinbus.com](http://www.colinbus.com)