

Technology designed to impress

Control unit

Standard control unit	Siemens 840 D / AGATHON Graphic User Interface
	Safety integrated / Mobile control deck

Drives and speed ranges

Grinding spindle drive S1	9 kW, (25 - 63 m/s)
Control spindle drive S2	2 kW, infinitely variable max. 800 min ⁻¹
Diamond-dressing roller drive S3	max. 6400 min ⁻¹
Grinding wheel slide X1	max. 3000 mm/min
Control wheel slide X2	max. 3000 mm/min
Dressing slide of grinding wheel Q1	max. 5000 mm/min
Dressing slide of control wheel Q2	max. 3000 mm/min

Wheel dimensions

Grinding wheel diameter	max. Ø 250 mm min. Ø 190 mm
Grinding wheel width	(shape1) 100 mm (shape7) 127 mm angular infeed grinding max. 90 mm
Control wheel diameter	max. Ø 175 mm min. Ø 155 mm
Control wheel width	(shape1) 100 mm (shape7) 127 mm angular infeed grinding max. 90 mm

Operating ranges

Workpiece diameter	Ø 0.5 to 30 mm *)
Max. contact length for plunge grinding 0°	100 / 125 mm
Max. contact length for angular infeed grinding	85 mm

Axes travel ranges

Grinding wheel slide X1	120 mm
Control wheel slide X2	90 mm
Dressing slide of grinding wheel Q1	135 mm
Dressing slide of control wheel Q2	135 mm
Inclination angle of control wheel	manual, max. ± 5°
Swiveling axis C2	manual, +10° to - 7.5°

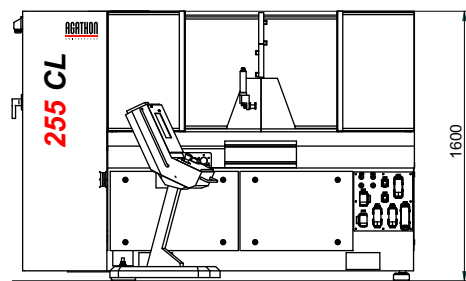
Axes resolution

Grinding wheel slide X1	0.0001 mm
Control wheel slide X2	0.0001 mm
Dressing slide of grinding wheel Q1	0.0001 mm
Dressing slide of control wheel Q2	0.0001 mm
Inclination angle of control wheel	manual, 10'
Swiveling axis C2	manual, for 100 mm workpiece length 0.001 mm

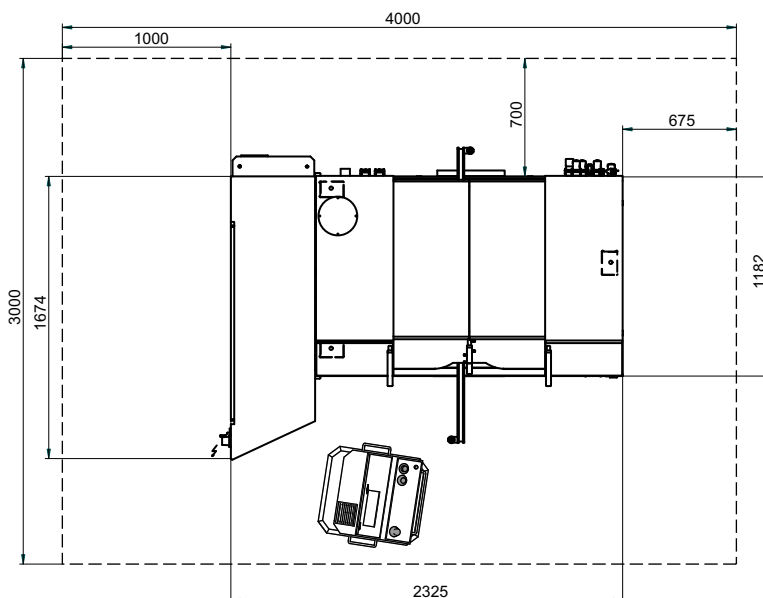
Connection data

Air pressure	constant, 5 to 6 bar
Electrical connection	3 x 400 V 50/60Hz
other voltages	upon request
Fuse protection including coolant cleaning unit and suction	40 A

Floor plan

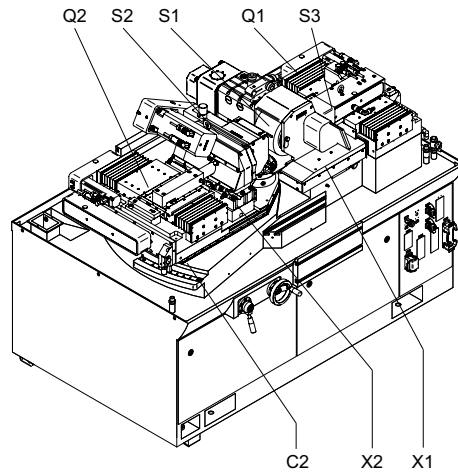


*) Bigger diameter are possible on request (depending on material and stock removal).



Axes

X2	Control wheel slide
Q2	Dressing slide of control wheel
S2	Control wheel spindle
X1	Grinding wheel slide
Q1	Dressing slide of grinding wheel
S1	Grinding wheel spindle
S3	Drive of diamond dressing roller
C2	Swiveling axis of control wheel



Place requirements

Machine and control unit without maintenance access	2.4 m x 2.4 m = 5.8 m ²
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Machine and control unit with maintenance access	3.5 m x 3 m = 10.5 m ²
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Installations with loader and coolant cleaning unit are customized

Weight

Machine	approx. 3800 kg
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255 CL

the economical

Flexible centerless cylindrical grinding machine
delivering high productivity



Cost-effective



255 CL

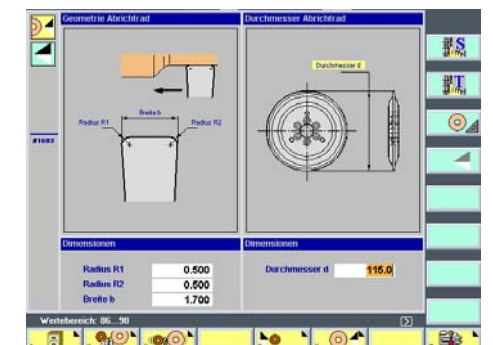
Easy to operate



Grinding area



Siemens 840 D control



AGATHON Graphic User Interface

Applications

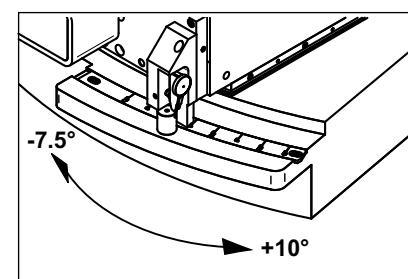
Our 255 CL multi-purpose centerless cylindrical grinding machine can be used for plunge-cut and through-feed grinding. The machine incorporates computerized numerical control (CNC) and provides you with maximum precision for parts with diameters between 0.5 and 15 mm *) and lengths of up to 125 mm. The 255 CL machine will deliver you the benefits of high productivity, user friendliness and safety.

Fast changeovers

The new 255 CL is a high cost-effective centerless cylindrical grinding machine. It is characterized by its considerable flexibility and its simple and time efficient changeovers. The 255 CL can be used for both large and small-volume production.

Simple angle adjustment

The swiveling control wheel slide is manually adjustable by +10° on the operator's side and -7.5° on the opposing side. This flexibility enables time-saving correction of cylindricity. Consequently, the machine can be used for frequently required angular infeed grinding with minimum setup times.



Innovative 4-axis concept

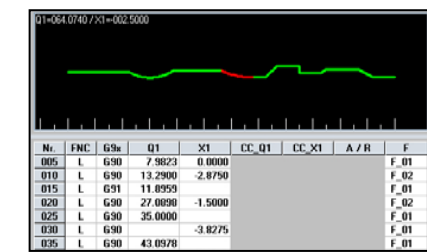
Our 4-axis concept epitomizes the innovation we applied in designing this machine means the axes are independent and de-coupled from one another. Furthermore, the transverse axes are arranged in the form of a bridge above the grinding axes and attached directly to the machine base. This design will prevent the cumulative errors that can often occur with conventional compound rest slide technology.

Full protective enclosure

The compact machine is equipped with a full enclosure. The generously-dimensioned safety doors will provide you with easy access to the whole working area from all sides. The enclosure complies with the current CE Directives that are in force.

Convenient control

AGATHON has developed a user friendly interface to clearly guide operators through menu options using text and graphics. No ISO code knowledge is required for programming using our contour editor. The respective data is entered into table-based input blocks and directly displayed in graphics. A "DXF File Importer" option is available for complex dressing contours.



Contour editor

Options / Peripherals

- Automatic balancing
- Rotating dressing tool
- Concentric-grinding attachment
- Creep-feed grinding attachment
- Compact filter system
- Fine filter
- Air filter
- Fire extinguishing system

Customer-specific automation

Customized handling or measuring systems are available on request.

High-precision dressing system

The dressing system for the grinding and control wheel will provide a straightness of < 1 µm over 127 mm. This precision is achieved through a reference template (patent has been applied for).

Domains of application

- Component-supply industry
- Precision engineering
- Medical equipment
- Dental equipment
- Hydraulic & pneumatic systems
- Tools
- Electrical equipment
- Anti-friction bearings