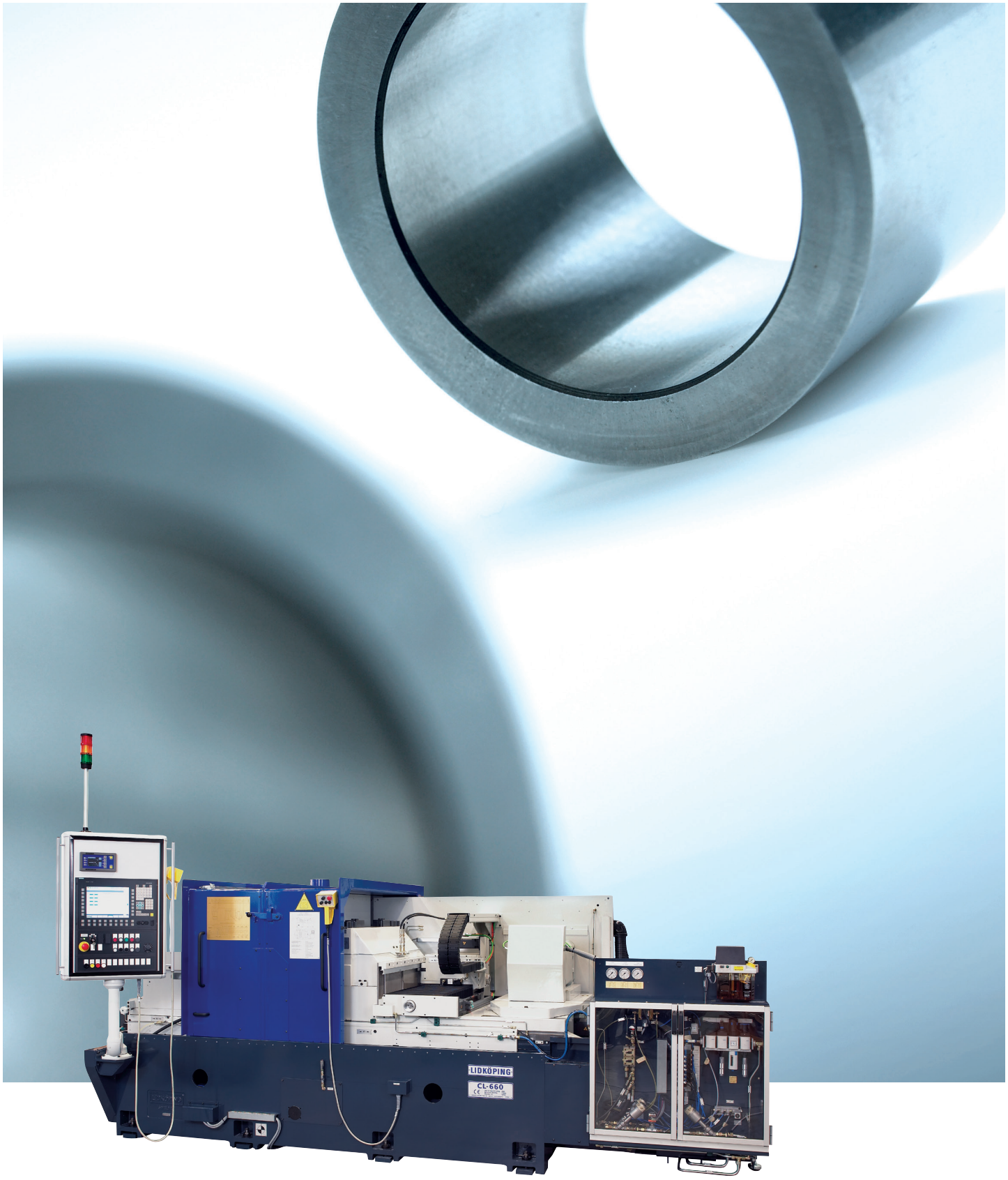



# LIDKÖPING
# CL630/660

Wide-wheel centerless machine for
high-output precision grinding

UVA LIDKÖPING
HIGH PRECISION GRINDING

# CL630/CL660

## UVA LIDKÖPING is Sweden's largest machine tool manufacturer. We specialise in the manufacture of precision grinding systems.

Our goal is to give you accuracy, efficiency and reliability through our products, our process knowledge and development, customer support and service. Through close cooperation with end-users, we ensure a correct and profitable solution for you, the customer.

The LIDKOPING centerless grinder is designed and manufactured to meet practically any challenge in precision grinding. The Centerless is the foundation stone of our reputation as a leader in precision grinding technology.

### Infeed or throughfeed grinding
The CENTERLESS grinding machine offers two main type of grinding operations, infeed or throughfeed grinding depending on the shape of the work piece.

### Grinding spindle
Main spindle drive permits constant grinding speed.

### Regulating spindle
Is servomotor driven via a hypoid gear. Speed range 10 rpm to 750 rpm.

### Spindle drives
Belt and pulleys are used as main spindle drive for the grinding spindle.

### Cartridge-type spindles
for grinding and regulating wheel enable quick wheel change. Wheels can be mounted directly on spindles, or on a separate wheel mount.

### Grinding wheel
is dressed by a servomotor-driven hydrostatic CNC dresser with fixed diamond or diamond form roller.

### Regulating wheel
is dressed by a servomotor-driven hydrostatic CNC dresser

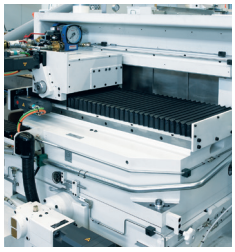
### Regulating wheel headstock
can be fed manually, or via a servo-motor with pre-loaded ball screw.

### Adjustable work blade support
### Spindle drives
Siemens main spindle drive is used for grinding spindle. Servo motors are standard for regulating wheels.

### Control system
Graphical user interface provides user-friendly controls and Integrated
Program Generator IPG. Control System, Siemens 840D sl.

The SINUMERIK 840D sl is a distributed, scalable, open and inter-connecting control system that offers a wide range of functions. This flexible, universal CNC can be used for up to 31 axes.

*Dressing unit for grinding wheel*



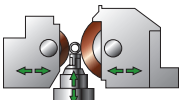
*Dressing unit for regulating wheel*

*Grinding gap*

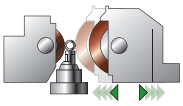
**Camshaft**
Automotive - External

**Outer Ring**
Bearing - External

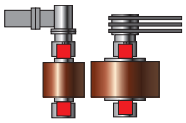
**Shaft**
Automotive - External



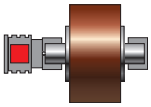
### Fixed work center
with vertically adjustable workblade support and movable grinding/regulating wheel headstocks. No adjustment is needed to in- and outfeed devices, to compensate for wheel wear.



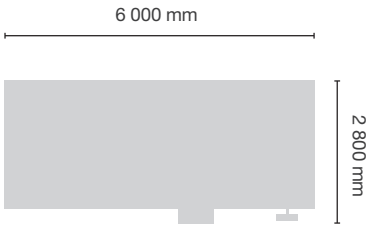
### Hydrostatic grinding wheel headstock
with pre-loaded servomotor-driven ball screw provides feed resolution of 0.1 µm, forwards and backwards.



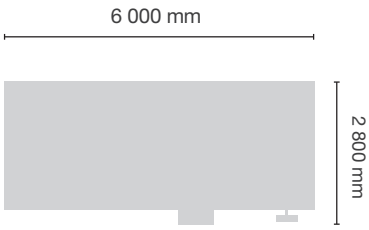
### Dual bearing support
on grinding and regulating spindles ensures high stability in the grinding gap, essential to high quality grinding.



### Power transfer
to grinding spindle is via belt and pulley, utilizing an independent pulley bearing and spline sleeve to eliminate radial tension.




CL630




CL660

## KEY FEATURES

Key features that guarantee accuracy, output, life-cycle economy and safety:

- Fixed work center
- Hydrostatic grinding wheel headstock – down to 0.1 µm feed resolution
- Grinding gap stability
- No radial forces from spindle drive belts on grinding spindle
- Dual-supported grinding and regulating spindles
- Short cycle times
- Safe, easy operation

## ABOUT US

UVA LIDKÖPING develops, markets, manufactures, and installs high-precision grinding machines with surrounding equipment within the area of high precision grinding. We market our products under the trademarks LIDKÖPING and UVA. UVA LIDKÖPING business areas include grinding machines, and complete aftermarket solutions that include service, productivity enhancing upgrades, and rebuilds.

UVA LIDKÖPING has delivered over 10 000 machines, and is represented in every part of the industrialized world. With over a 100 year old tradition of engineering excellence, UVA LIDKÖPING is today a high-technology company in the vanguard of grinding research and development.

Extensive knowledge and grinding experience gives UVA LIDKÖPING a powerful technological advantage and our products are recognized for their consistently high performance and quality. Customers include many of the world's leading producers in the bearing, automotive and hydraulic industries.

**Joints**
Automotive - External

**Crankshaft**
Automotive - External

**Spools**
Hydralic - External

# Technical data

Please note that all data stated are correct at time of printing but are subject to change.

| Working Range | CL630 | CL660 |
|---|---|---|
| Maximum opening between new wheels | 150 mm | 250 mm |
| Recommended working range [1)] | 2.5-125 mm | 5-175 mm |
| Recommended working range for bar grinding | 8-125 mm | |
| Maximum workpiece length for infeed grinding, normal wheels | 295 mm | 605 mm |
| Maximum workpiece length for infeed grinding, recessed wheels | 395 mm | 695 mm |

| Grinding Wheel | | |
|---|---|---|
| Outer diameter, new wheel, standard/maximum | 610/630 mm | 610/630 mm |
| Outer diameter, worn wheel | 380 mm | 380 mm |
| Normal width | 300 mm | 610 mm |
| Maximum width, with recessed wheel | 400 mm | 700 mm |
| Bore diameter | 304.8 | 304.8 |
| Peripheral speed | max 63 m/s | max 63 m/s |

| Grinding Wheel Headstock | | |
|---|---|---|
| Resolution, servomotor | 0.1 µm | 0.1 µm |
| Max. feed rate, servomotor | 10 mm/s | 10 mm/s |

| Regulating Wheel | | |
|---|---|---|
| Outer diameter, new wheel, standard/maximum | 330/380 mm | 330/380 mm |
| Outer diameter, worn wheel | 255 mm | 255 mm |
| Normal width | 300 mm | 610 mm |
| Maximum width, with recessed wheel | 400 mm | 660 mm |
| Resolution, servomotor (headstock) | 0.1 µm | 0.1 µm |
| Bore diameter | 203 | 203 |
| Speed | 10-750 rpm | 10-750rpm |
| Regulating wheel's maximum inclination | 6 ° | 5 ° |

| Power requirements | | |
|---|---|---|
| Main motor | 37-100 kW | 37-100 kW |

| Dimensions & Weights | | |
|---|---|---|
| Height from floor to spindle centers | 1060 mm | 1060 mm |
| Footprint 2) | 6 000 x 2 800 mm | 6 000 x 2 800 mm |
| Net weight 3) | 11 500 kg | 13 500 kg |

[1)] Hollow components of greater diameter can be ground.
[2)] Including electrical cabinet and hydraulics. Excluding coolant equipment and loading equipment.
[3)] Basic machine, main motor, spindle, electrical cabinet and hydraulic equipment.



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