



# LIDKÖPING DG300/400/500/ 700/800

Double disc face grinding machine for  
High-output precision end grinding



# DG300/400/500/700/800

The UVA LIDKÖPING DG Platform is made in five different sizes. They are all equipped with two vertical grinding wheels for grinding of two parallel surfaces simultaneously.

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.

## DOUBLE DISC FACE GRINDING MACHINE

By ensuring flat and parallel surfaces, the DG grinding machines enhance the accuracy of subsequent machining operations. Perfect for production line integrations, these machines serve small or large production lots equally well.

## CHUCKING AND LOADING PRINCIPLES

### DG300/400

Plunge grinding with free work piece rotation (driven by the grinding wheels). The work piece is indexed via the loading wheel into grinding position in a closed or an open pocket grinding bushing.

### DG500

For plunge grinding applications the work piece is placed via chute between three rollers and is driven to rotate by two of them. Fast change-over times below 10 minutes can be achieved. For throughfeed applications various types of rotary wheel loaders are used.

### DG700/800

The work piece is placed via an external robot between three rollers and is driven to rotate by two of them. A loading slide is feeding the work piece into the grinding position. For some work piece types the machine doesn't require any manual change-over for different work piece dimensions. It is all done automatically.

## GRINDING SPINDLES

The two grinding spindles are belt driven by motors from 7,5 kW to 33 kW, with fixed or variable speed and selectable direction of rotation. Coolant supply through the spindles ensures efficient cooling.

## GRINDING SLIDES

### DG300/400/700/800

The two linear roller bearing slides are run by belt driven servo- motors and ball screws.

### DG500

The two hydrostatic slides are run by servo motors and ball screws. The precision ground ball screw is designed by UVA LIDKÖPING. Positioning accuracy 0,1 µm.

## DRESSING

Dressing units are mounted directly on the box frames. The DG300/400 are equipped with multipoint diamond dressers and the DG500/700 are equipped with driven diamond roller dressers.

## 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.



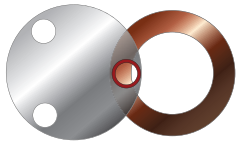
**Inner Ring DGBB**  
Bearing - Face



**Inner Ring DGBB**  
Bearing - Face

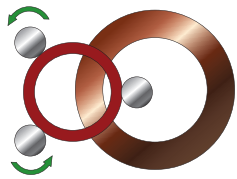


**Outer Ring DGBB**  
Bearing - Face



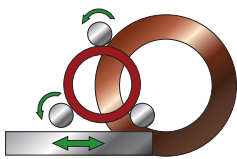
### DG300/400

3-station indexing loading wheel for plunge grinding.



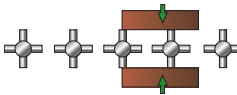
### DG500

Driven work piece loader for plunge grinding.



### DG700/800

Driven work piece loader for plunge grinding.



### DG500

Throughfeed grinding of universal joints.

## 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.

3 100 mm



DG300

2 800 mm



DG400

4 800 mm



DG500

3 900 mm



DG700

4 000 mm



DG800

2 800 mm

4 000 mm

3 000 mm

6 100 mm

6 528 mm



**Joints**  
Bearing - Face



**Inner Ring TRB**  
Bearing - Face



**Inner Ring SRB**  
Bearing - Face

# Technical data

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

| Grinding Wheels | DG300  | DG400  | DG500  | DG700  | DG800  |
|-----------------|--------|--------|--------|--------|--------|
| Outer diameter  | 300 mm | 500 mm | 500 mm | 700 mm | 800 mm |

## Work Piece Dimensions

|                |          |           |           |            |            |
|----------------|----------|-----------|-----------|------------|------------|
| Outer diameter | 5-160 mm | 15-240 mm | 20-250 mm | 190-610 mm | 300-820 mm |
| Maximum width  | 80 mm    | 120 mm    | 80 mm     | 250 mm     | 250 mm     |

## Consumption

|                  |               |               |               |               |               |
|------------------|---------------|---------------|---------------|---------------|---------------|
| Hydraulic unit   |               |               | 7 MPa         | 7 MPa         | 7 MPa         |
| Pneumatics       | 0.5-0.7 MPa   | 0.5-0.7 MPa   | 0.5-0.7 MPa   | 0.5-0.7 MPa   | 0.5-0.7 MPa   |
| Coolant Pressure | 0.15-0.60 MPa | 0.15-0.60 MPa | 0.15-0.60 MPa | 0.15-0.60 MPa | 0.15-0.60 MPa |
| Coolant Flow     | 110 l/min     | 170 l/min     | 150 l/min     | 170 l/min     | 170 l/min     |

## Various

|                |               |               |               |               |             |
|----------------|---------------|---------------|---------------|---------------|-------------|
| Machine weight | 4 200 kg      | 8 000 kg      | 8 500 kg      | 12 500 kg     | 13 300 kg   |
| Footprint (mm) | 3 100 x 2 800 | 2 800 x 4 000 | 4 800 x 3 000 | 3 900 x 6 100 | 4000 x 6528 |

| Grinding Spindle | Rotation Speed | Bearings                          | Spindle drive unit effect | Cutting Speed |
|------------------|----------------|-----------------------------------|---------------------------|---------------|
| DG300            | max 3 700 rpm  | Precision angular contact bearing | 7.5-15 kW                 | 30 m/s        |
| DG400            | max 2 000 rpm  | Precision angular contact bearing | 18-22 kW                  | 30 m/s        |
| DG500            | max 2 000 rpm  | Precision roller bearing          | 22-33 kW                  | 30 m/s        |
| DG700/800        | max 1 500 rpm  | Precision angular contact bearing | 22-30 kW                  | 30 m/s        |

| Slides    | Feed rate | Drive unit type   | Resolution |
|-----------|-----------|---|------------|
| DG300     | 50 mm/s   | Linear roller bearing. Ballscrew. Servomotor                | 0.25 µm    |
| DG400     | 200 mm/s  | Linear roller bearing. Ballscrew. Servomotor                | 0.25 µm    |
| DG500     | 50 mm/s   | Concentric linear hydrostatic slides. Ballscrew. Servomotor | 0.10 µm    |
| DG700/800 | 200 mm/s  | Linear roller bearing. Ballscrew. Servomotor                | 0.25 µm    |

| Dressing | Dressing speed | Dresser unit               | Dressing drive        |
|----------|----------------|----------------------------|-----------------------|
| DG300    | max 100 mm/s   | Multipoint diamond dresser | motor worm gear drive |
| DG400    | max 150 mm/s   | Multipoint diamond dresser | motor worm gear drive |
| DG500    | max 100 mm/s   | Rotating diamond roller    | motor worm gear drive |
| DG700    | max 100 mm/s   | Rotating diamond roller    | motor worm gear drive |
| DG800    | max 100 mm/s   | Multipoint diamond dresser | motor worm gear drive |