



LIDKÖPING

DG300/400/500/700/800

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



DG300/400/500/700/800

The KMT Precision Grinding 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 enhances the accuracy of subsequent machining operations. Perfect for production line integrations, these machines serves 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 through-feed 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 KMT Precision Grinding AB. Positioning accuracy 0,1 µm.

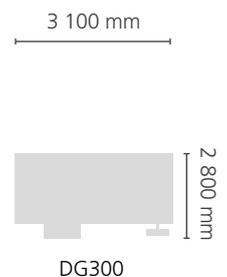
Dressing

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.



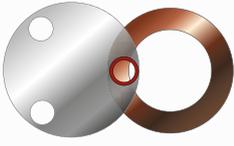
Inner Ring DGBB
Bearing - Face



Inner Ring DGBB
Bearing - Face

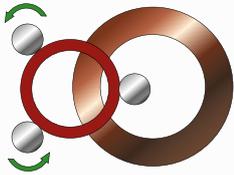


Outer Ring DGBB
Bearing - Face



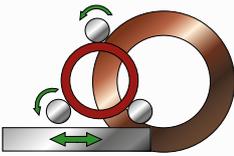
DG300/400

3-station indexing loading wheel for plunge grinding.



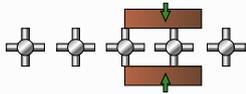
DG500

Driven work piece loader for plunge grinding.



DG700/800

Driven work piece loader for plunge grinding.



DG500

Throughfeed grinding of universal joints.

About us

KMT Precision Grinding 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. KMT business areas include grinding machines, and complete aftermarket solutions that include service, productivity-enhancing upgrades, and rebuilds.

KMT 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, KMT is today a high-technology company in the vanguard of grinding research and development.

Extensive knowledge and grinding experience gives KMT 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.

2 800 mm



DG400

4 800 mm



DG500

3 900 mm



DG700

4 000 mm



DG800



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				
Coolant Pressure	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

