

# LIDKÖPING

SUU240/320/600 SUUC240/600/800

Flexible, fast change over machine for precision high output. Single operations, internal, external or face grinding. Simultaneous external and internal or internal and rib face grinding.



# SUU/SUUC

The Lidköping SUU/SUUC grinding machine delivers high output quality for single grinding operations: internal, external, or rib face; or simultaneous grinding operations: external and internal or internal and rib face.

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

## Grinding operations setup

SUU machine is configured for single grinding operations, external, internal or rib face grinding.



SUUC machine is configured for simultaneous, external and internal or internal and rib face grinding.



## Hydrostatic grinding slides

Hydrostatic length- and cross slides, equipped with linear motors giving a feed rate of  $1000\text{ mm/s}$  and a feed resolution of  $0.01\text{ }\mu\text{m}$ .

## Grinding spindles

A wide range of high-frequency spindles are available. Grinding wheel peripheral surface speeds up to  $80\text{ m/s}$ .

## Work head

A unit consisting of work head spindle, driving plate, magnetic chuck or centric chuck and measuring unit. The work head is hydrostatic or roller bearing supported, equipped with a variable speed motor.

## Gauging method

In process electronic gauging.

## Chucking principle

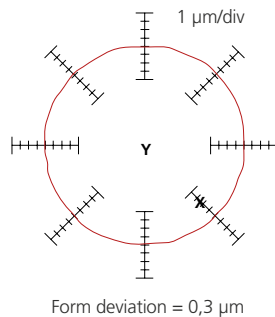
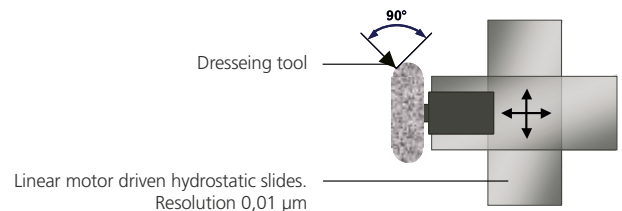
**SUU** - Single operation. Shoe centerless with magnetic chucking or centric chucking.

**SUUC** - Simultaneous operations. Shoe centerless with magnetic chucking.

## Dressing

The units are fixed to the machine base and as standard equipped with rotating diamond discs, single point diamond, full profile diamond roller or hydrostatic radius dresser controlled by NC path. Dressing is performed during work piece loading.

Lidköping hydrostatic NC radius dresser, generates by interpolation between the length and the cross slide. The torque motor in the dresser keeps the dressing tool perpendicular to the profile of the grinding wheel. This dressing concept gives a high flexibility with the possibility to dress radius, track form with end drop etc.



Radius 100 mm  
Feedrate 10 mm/s

Form deviation result when measuring equal to NC controlled path circle

## 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.



## Key features

- Linear motor driven hydrostatic slides – feed resolution  $0.01\ \mu\text{m}$
- Fast change over and maximum machine uptime
- Shoe centerless or centric chuck
- Siemens 840D solution line
- Various loading possibilities

## 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.

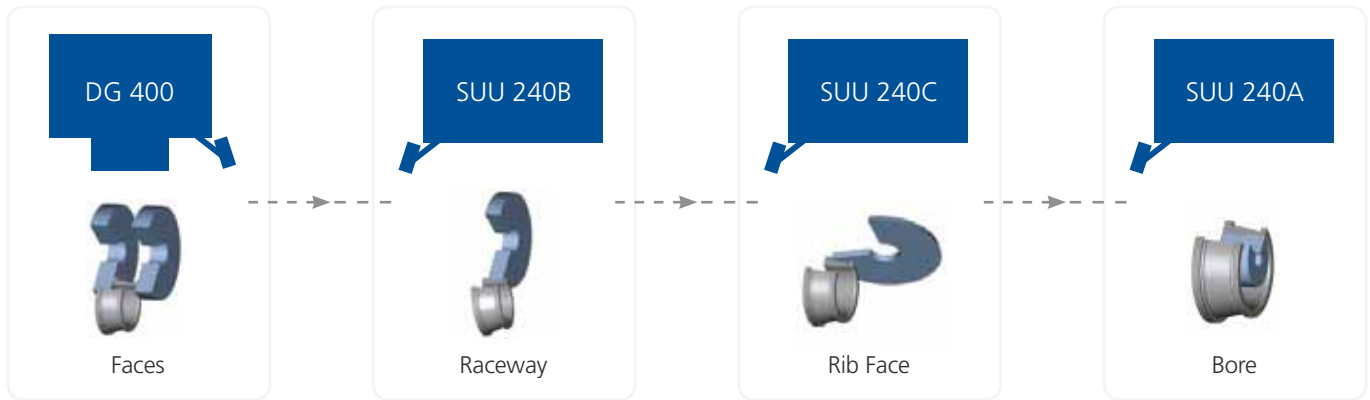
KMT has delivered over *10 000 machines*, and is represented in every part of the industrialized world. With over a *100 year* old tradition of engineering excellence, KMT is today a high-technology company in the vanguard of grinding research and development.

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.

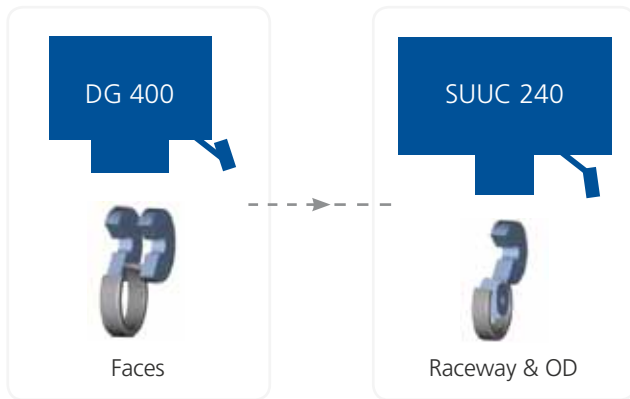
# Example - TRB Grinding

Operation Sequence Small/Medium Size

## Line 1 - Inner Ring



## Line 2 - Outer Ring



Gear Part  
Automotive - Internal



Inner Ring Spindle  
Bearing - External



Outer Ring Flange  
Bearing - Internal



Outer Ring Truck HUB  
Bearing - External and Internal



Outer Ring Railway  
Bearing - External and Internal



Inner Ring SRB  
Bearing - External and Internal





Inner Ring Truck HUB  
Bearing - External or Internal or Rib Face



Outer Ring Spindle  
Bearing - External or Internal or Rib Face



Outer Ring ACBB  
Bearing - External or Internal



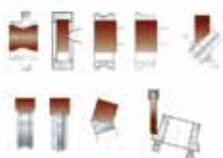
Inner Ring DGBB  
Bearing - External and Internal



Inner Ring TRB  
Bearing - Internal and Rib Face

# SUU Technical data

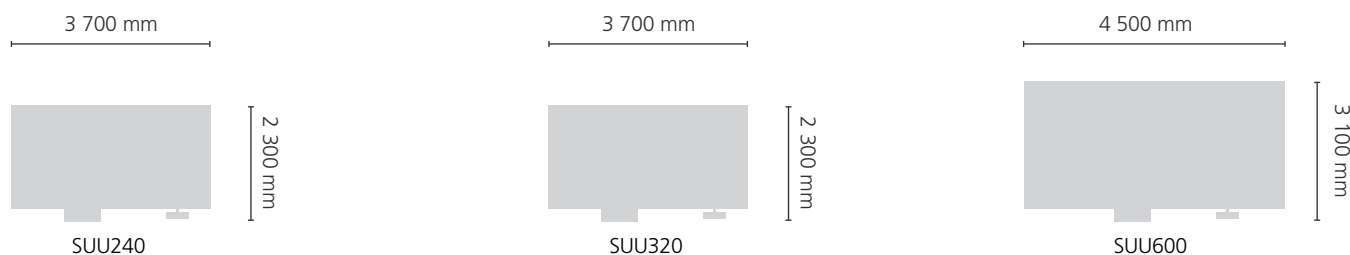
Please note that all data stated are correct at time of printing but are subject to change.

Machine	Type	Workholding	Principle	Work Piece Dimension		Grinding Limitation
SUU240	Internal External Rib face	Shoe Centerless / Centric		OD	Width	max 80 / Rib face width max 13
				Ø 20 - 240	max 120	
SUU320				Ø 100 - 320	max 140	320A max 110 mm 320B max 140 mm
SUU600	Ø 150 - 600	max 200	max 200 (250)			

	SUU240A	SUU240B	SUU240C	SUU240D	SUU240E
Workholding	Shoe Centerless	Centric	Centric	Centric	Centric
Grinding wheel speed (m/s)	80	80	80	80	80
Grinding wheel size (mm)	max Ø 125	Ø 340	Ø 200	max Ø 125	Ø 340
Work head spindle speed (rpm)	max 2 800	max 2 800	max 2 800	max 1 200	max 1 200
Work head spindle angle (°)	0 - 30	25 - 0	0 - 30	0 - 30	0 - 30


	SUU320A	SUU320B	SUU600A	SUU600B
Workholding	Shoe Centerless	Shoe Centerless	Shoe Centerless	Shoe Centerless
Grinding wheel speed (m/s)	80	80	80	80
Grinding wheel size (mm)	max Ø 150	Ø 340	Ø 250	Ø 610
Work head spindle speed (rpm)	max 1 000	max 1 000	max 400	max 400
Work head spindle angle (°)	0 - 30	25 - 0	0 - 30	0 - 30

	SUU240	SUU320	SUU600
Machine weight (kg)	9 000	10 000	21 000
Footprint (mm)	3 700 x 2 300	3 700 x 2 300	4 500 x 3 100
Noise Level	75 dB (A)	75 dB (A)	75 dB (A)



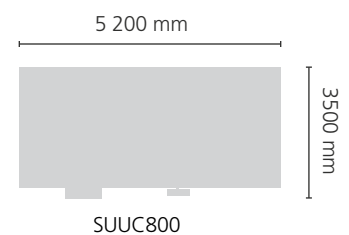
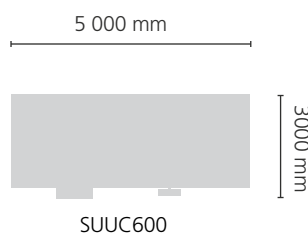
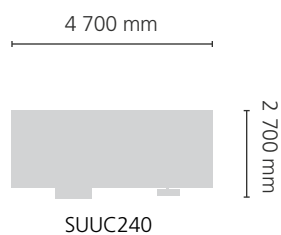
# SUUC Technical data

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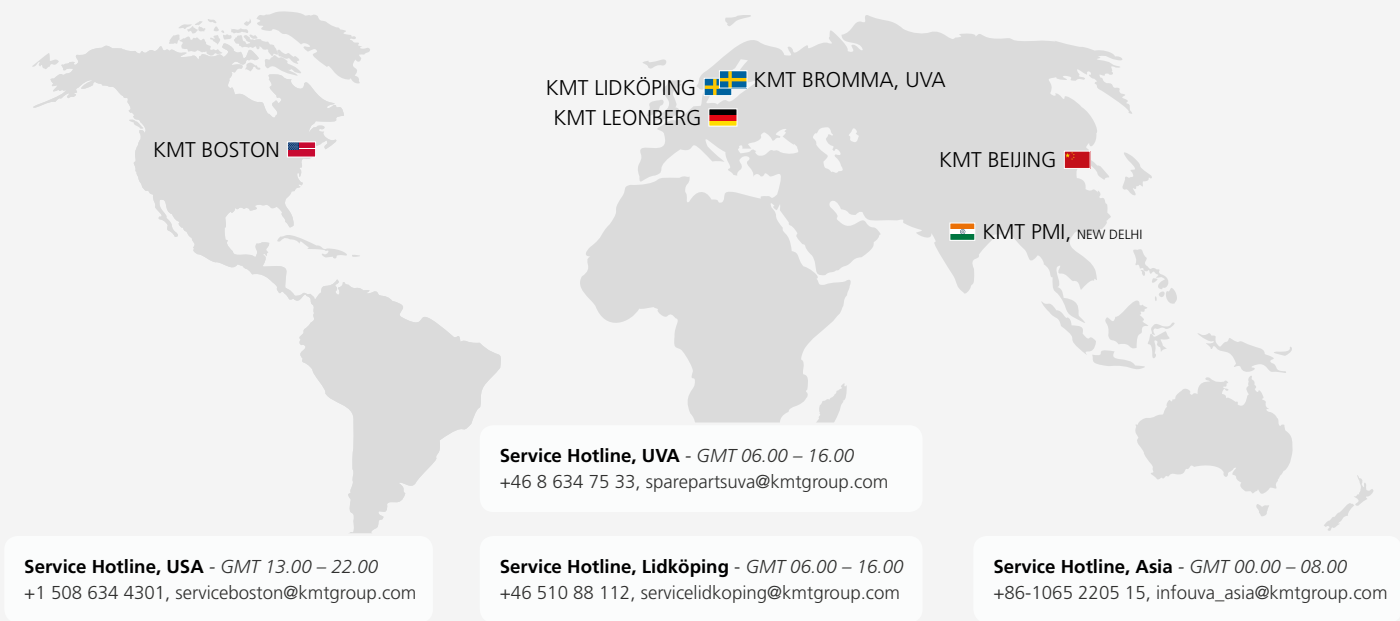
Machine	Type	Workholding	Principle	Work Piece Dimension		Grinding Limitation
				OD	Width	
SUUC240	External/Internal Internal/Rib face	Shoe Centerless		min Ø 80 max Ø 250	max 130	max 100
SUUC600	External/Internal Internal/Rib face			min Ø 130 max Ø 600	max 250	max 250
SUUC800	External/Internal			min Ø 370 max Ø 820	30-180	max 250

	SUUC240	SUUC600	SUUC800
Grinding wheel speed (m/s)	variable up to 80	variable up to 80	variable up to 80
Ext. Grinding wheel size (mm)	max Ø 355	max Ø 610	max Ø 610
Int. Grinding wheel size (mm)	max Ø 125	max Ø 250	max Ø 280
Work head spindle speed (rpm)	max 1000	max 400	max 400

	SUUC240	SUUC600	SUUC800
Machine weight (kg)	12 000	25 000	27 000
Footprint (mm)	4 700 x 2 700	5 000 x 3 000	5 200 x 3 500
Noise Level	75 dB (A)	75 dB (A)	75 dB (A)



# KMT Precision Grinding



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