



# KMT Precision Grinding Bearings for all industrieries

ACBB, CRB, DGBB, SRB & TRB



## About us

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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.





## Perfection by nature

The perfect form is the one that exactly matches your specifications. Weather, wind and water can take millennia to sculpt nature's beauty. We take just seconds to give the accurate form to hard metal components - from small rings to wind turbine slewing bearings.

We are KMT and our specialty is precision grinding. Our job is to give you perfect form and by doing so ensure perfect performance.

What the nature do in thousands of years KMT perform in a few seconds.





KMT Precision Grinding is a Swedish company owned by Nordstjernan, a family-controlled, unlisted investment company in Stockholm, Sweden.



With our trademarks LIDKÖPING and UVA, KMT Precision Grinding has a long history as a leading global supplier of precision grinding machines for the bearing and automotive industries and with more than 10,000 machines installed around the world.

KMT Precision Grinding AB has production units in Gurgaon India, Lidköping and Bromma in Sweden. KMT also has fully owned subsidiaries in Germany, USA and China with Sales and Aftermarket services.

[KMT offer various Machine Integration solutions](#)

#### **Single Machine Solution**

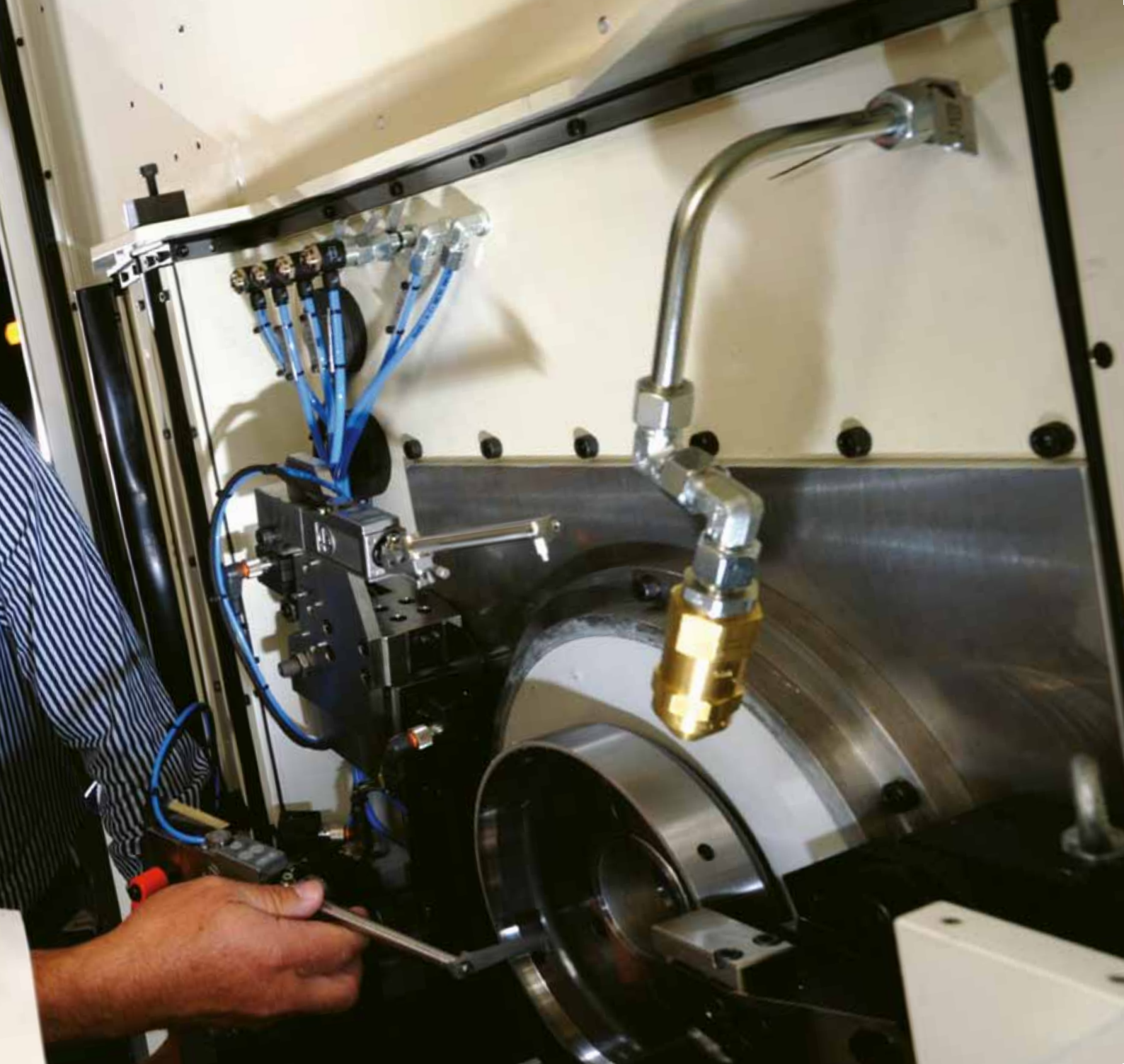
Machine with grinding application – developed and integrated.

#### **Cell Solution**

Machine including supporting equipment – material handling, media supply etc.

#### **Production Line Solution**

KMT machines (and 3rd party vendor machines & equipment) integrated into a full turnkey production system. With active involvement from the customer a concept is agreed, our engineers design in Pro Engineer, the most suitable grinding solutions. It can be a solution from our standard range or a customized version or perhaps have an added innovative feature. After customer approval, orders are placed at suitable suppliers, with highly specialized details being designed in-house by our own engineers. The grinding solution is being followed from order to final installation at customer site.



### KMT Precision Grinding history

KMT Precision Grinding, today's world leader in the field of precision grinding machines, is one of the oldest machine manufacturers in Sweden.

The company is a merger of UVA International AB (Nomy AB) and KMT Lidköping (Lidköpings Mekaniska Verkstad AB), founded in 1928 and 1875. Lidköping started off with the production of exterior lighting, park benches, ploughs and other agricultural products.

UVA began their production of hydrodynamic bearings as well as gearboxes for among other things railways. The engine construction started in 1902 and in 1908 and we became one of the first suppliers to SKF, established in 1907.

**1875**

*Lidköping Machine Tools AB was founded*

**1928**

*Nomy, which later became UVA, was founded in Stockholm*

**1996**

*UVA is incorporated in Karolin Machine Tools (KMT)*

**2000**

*SKF sells Lidköping Machine Tools AB to KMT*

**2007**

*UVA and KMT Lidköping merge and the company changes its name to KMT Precision Grinding AB*



# Key Conditions for Precision Grinding



## Speed & Precision

- Linear motors
- Integrated torque motors
- High power HF spindles

## Stiffness & Damping

- Hydrostatic guide ways
- Hydrostatic workhead spindles
- Hydrostatic dressing units

## Integrated Linear Motors



- Protected position inside the hydrostatic slide.
- Acceleration: close to 1 g
- Feed speed: 4 times faster than ball screw.
- High resolution glass scales, feedback resolution 2 nanometer.
- Repeatability accuracy 0,05  $\mu\text{m}$ .

## Lidköping Hydrostatic Slides

- Cross-balanced hydrostatics, for highest stiffness.
- No slip stick, close to zero friction.
- No metal-to-metal contact, everlasting life.
- Maintenance free.

## More than 80 years experience put into the software



- Integrated program generator.
- Setting based on desired removal rate,  $Q'$ .
- Size and taper compensations calculated from read-outs.

## Acoustic Emission analysis

- Gap-elimination.
- Dressing supervision.
- Operator aid for setting the optimized grinding process.

## Optimized Tooling

- PCD shoes
- Grinding wheel profile shaped coolant nozzles
- No flexible hoses



## Change-over



1. Change tooling



2. Grind first ring



3. Measure result.



4. Input actual measured values into control.  
Control calculates adjustments based on measured values.



5. Machine automatically compensates changes via a dressing cycle.



6. Production is run.

# Machine Integration Solution



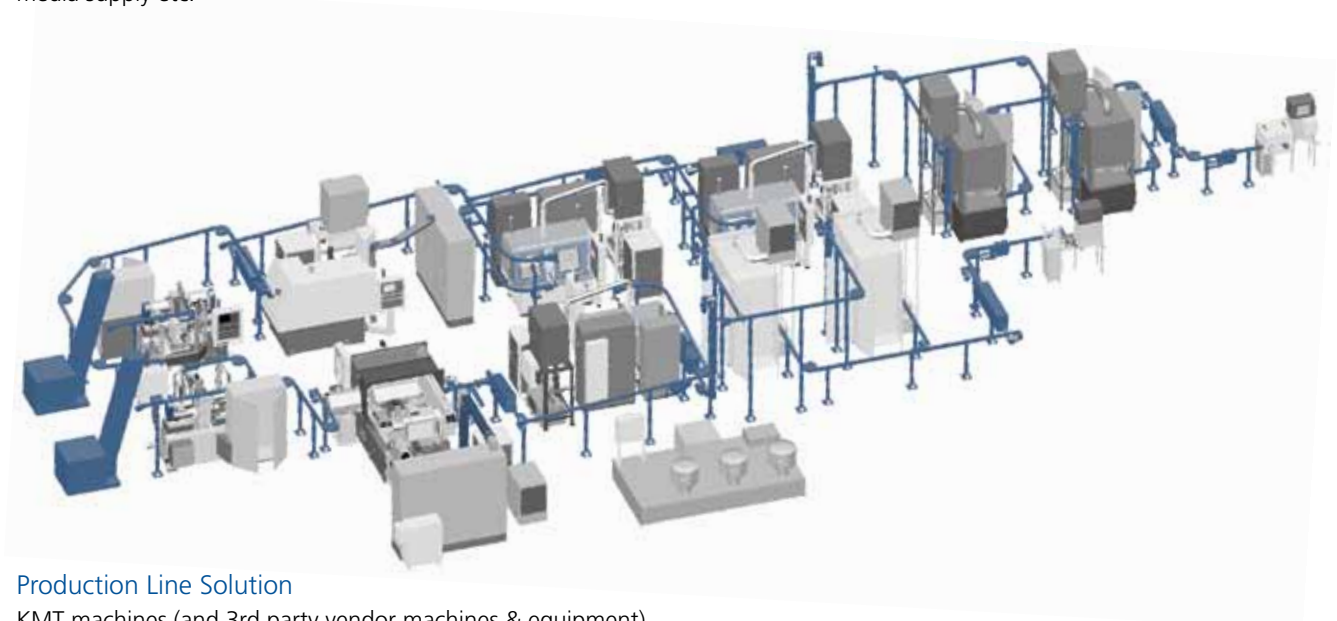
## Single Machine Solution

Machine with grinding application – developed and integrated.



## Cell Solution

Machine including supporting equipment – material handling, media supply etc.



## Production Line Solution

KMT machines (and 3rd party vendor machines & equipment) integrated into a full turnkey production system



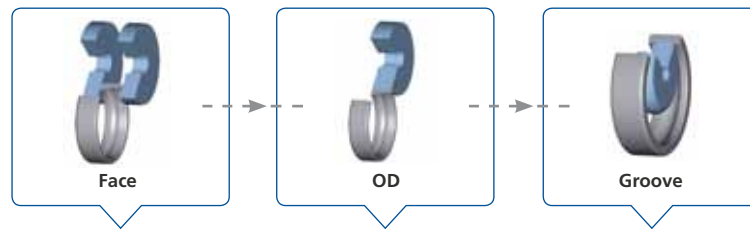
# Bearings for all industriars

ACBB, CRB, DGBB, SRB & TRB

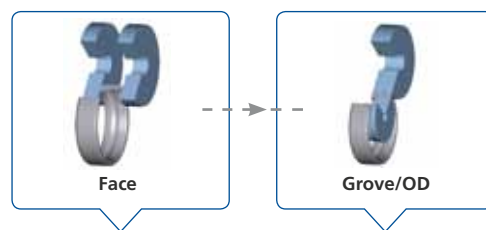
# ACBB - Angular Contact Ball Bearing

## Outer Ring - Grinding process

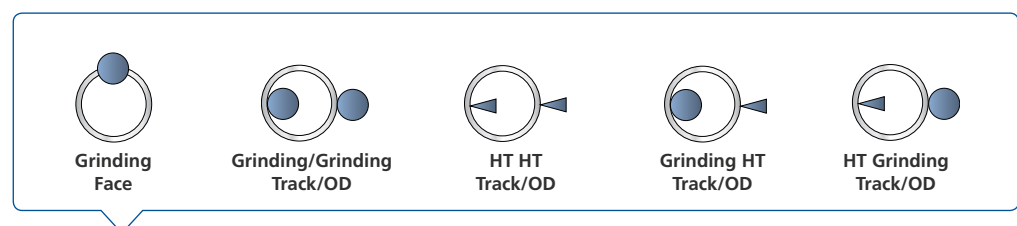
All values are given in mm.



Work Piece $\varnothing$	Width Max	Machine	Machine	Machine
20-240	120	DG400	SUU240B	SUU240A
100-320	140	DG700	SUU320B	SUU320A
150-600	200	DG700	SUU600B	SUU600A



Work Piece $\varnothing$	Width Max	Machine	Machine
80-250	130	DG400	SUUC240
130-600	250	DG700	SUUC600
370-820	180	DG800	SUUC800



Work Piece $\varnothing$	Width Max	Machine
500-1500	500	VTG1500
1300-4000	500	VTG4000



Outer Ring

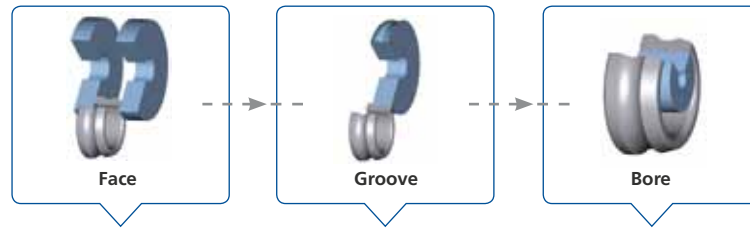


Outer Ring

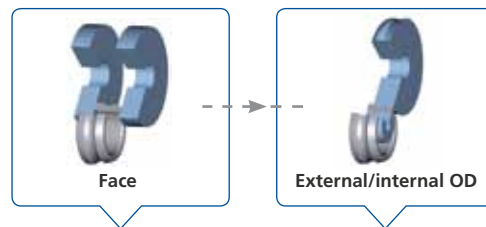


## Inner Ring - Grinding process

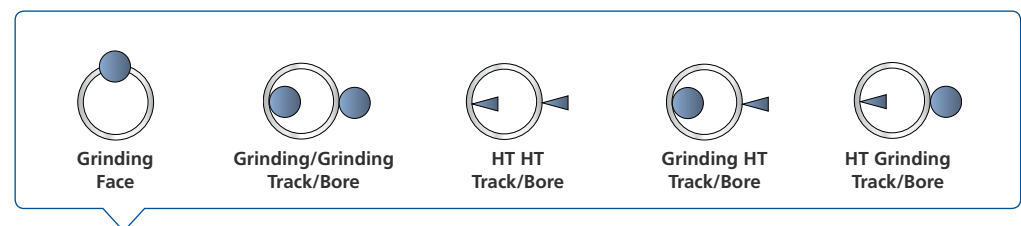
All values are given in mm.



Work Piece $\varnothing$	Width Max	Machine	Machine	Machine
20-240	120	DG400	SUU240B	SUU240A
100-320	140	DG400	SUU320B	SUU320A
150-600	200	DG700	SUU600B	SUU600A



Work Piece $\varnothing$	Width Max	Machine	Machine
80-250	130	DG400	SUUC240
130-600	250	DG700	SUUC600
370-820	180	DG800	SUUC800



Work Piece $\varnothing$	Width Max	Machine
500-1500	500	VTG1500
1300-4000	500	VTG4000



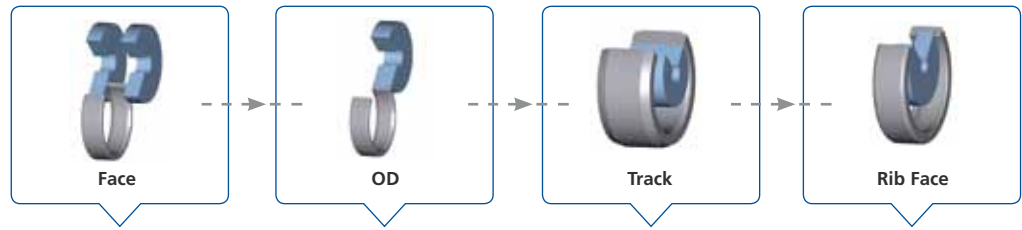
Inner Ring



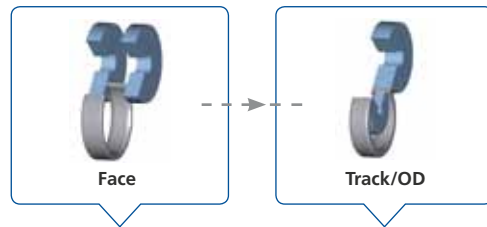
# CRB - Cylindrical Roller Bearing

## Outer Ring - Grinding process

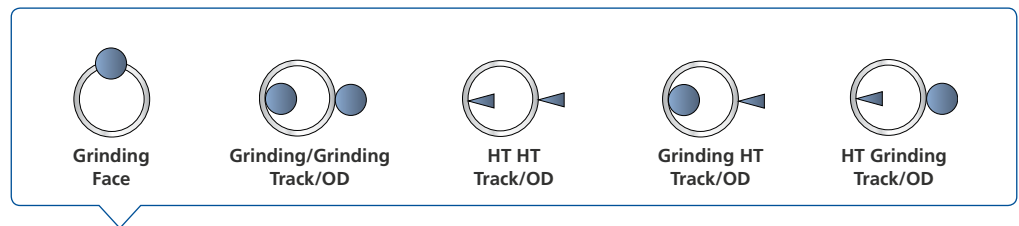
All values are given in mm.



Work Piece $\varnothing$	Width Max	Machine	Machine	Machine	Machine
20-240	120	DG400	SUU240B	SUU240A	SUU240A
100-320	140	DG700	SUU320B	SUU320A	SUU320A
150-600	200	DG700	SUU600B	SUU600A	SUU600A



Work Piece $\varnothing$	Width Max	Machine	Machine
80-250	130	DG400	SUUC240
130-600	250	DG700	SUUC600
370-820	180	DG800	SUUC800



Work Piece $\varnothing$	Width Max	Machine
500-1500	500	VTG1500
1300-4000	500	VTG4000



Outer Ring



Outer Ring

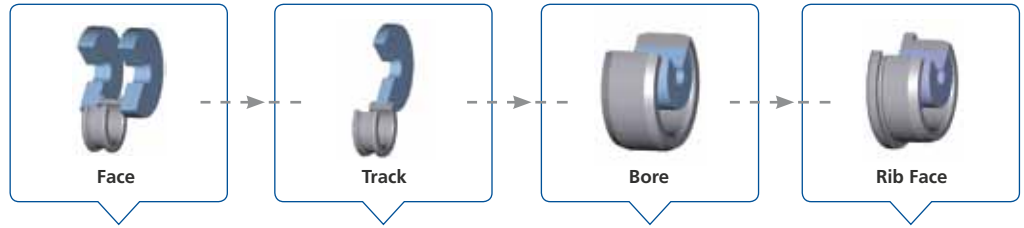


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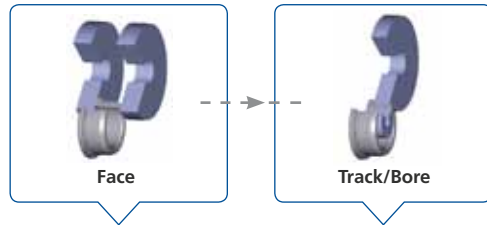


# Inner Ring - Grinding process

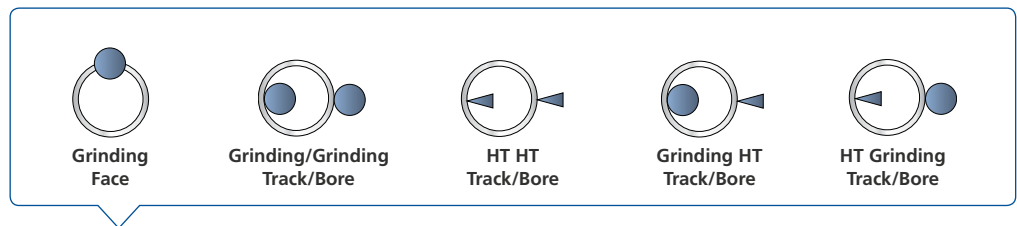
All values are given in mm.



Work Piece ø	Width Max	Machine	Machine	Machine	Machine
20-240	120	DG400	SUU240B	SUU240A	SUU240A
100-320	140	DG700	SUU320B	SUU320A	SUU320A
150-600	200	DG700	SUU600B	SUU600A	SUU600A



Work Piece ø	Width Max	Machine	Machine
80-250	130	DG400	SUUC240
130-600	250	DG700	SUUC600
370-820	180	DG800	SUUC800



Work Piece ø	Width Max	Machine
500-1500	500	VTG1500
1300-4000	500	VTG4000



Inner Ring

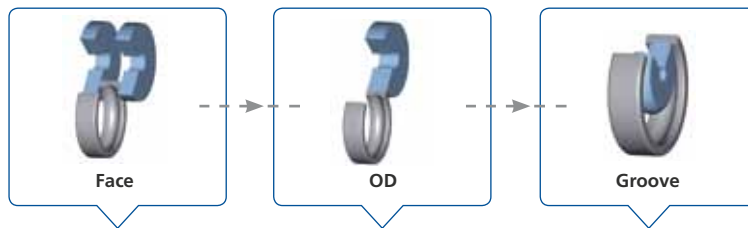


Inner Ring

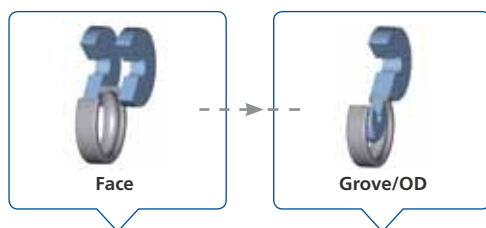
# DGBB - Deep Groove Ball Bearing

## Outer Ring - Grinding process

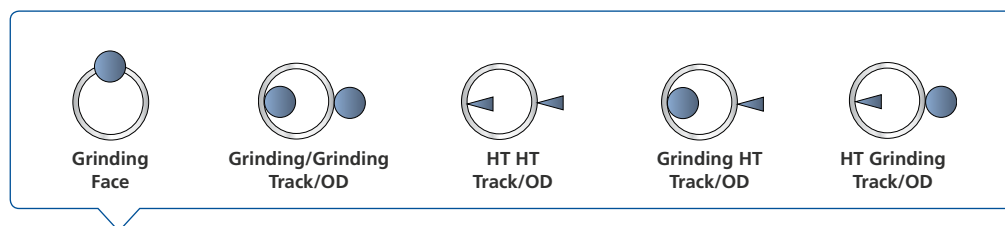
All values are given in mm.



Work Piece $\varnothing$	Width Max	Machine	Machine	Machine
20-240	120	DG400	SUU240B	SUU240A
100-320	140	DG700	SUU320B	SUU320A
150-600	200	DG700	SUU600B	SUU600A



Work Piece $\varnothing$	Width Max	Machine	Machine
80-250	130	DG400	SUUC240
130-600	250	DG700	SUUC600
370-820	180	DG800	SUUC800



Work Piece $\varnothing$	Width Max	Machine
500-1500	500	VTG1500
1300-4000	500	VTG4000



Inner Ring



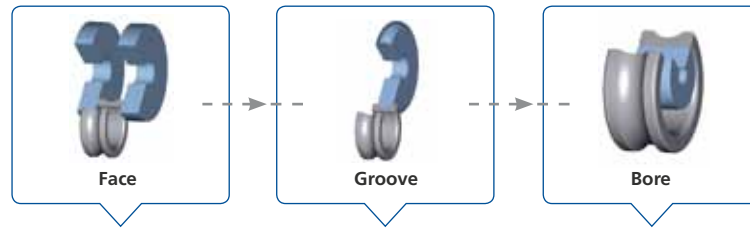
Inner Ring



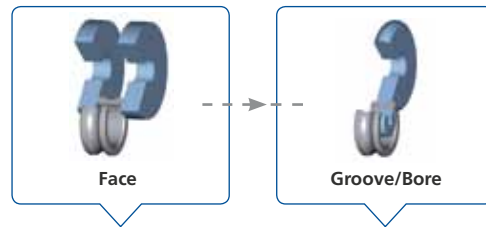


## Inner Ring - Grinding process

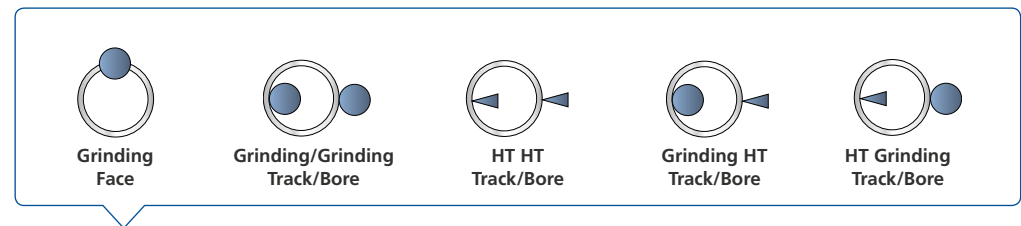
All values are given in mm.



Work Piece $\varnothing$	Width Max	Machine	Machine	Machine
20-240	120	DG400	SUU240B	SUU240A
100-320	140	DG700	SUU320B	SUU320A
150-600	200	DG700	SUU600B	SUU600A



Work Piece $\varnothing$	Width Max	Machine	Machine
80-250	130	DG400	SUUC240
130-600	250	DG700	SUUC600
370-820	180	DG800	SUUC800



Work Piece $\varnothing$	Width Max	Machine
500-1500	500	VTG1500
1300-4000	500	VTG4000



Inner Ring

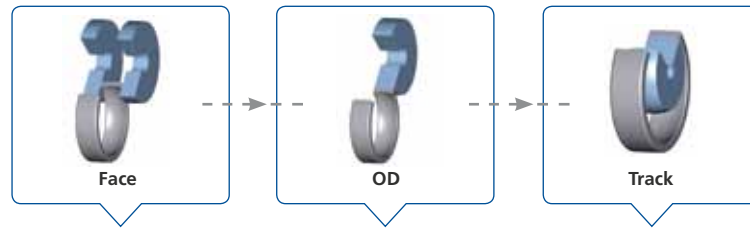


Inner Ring

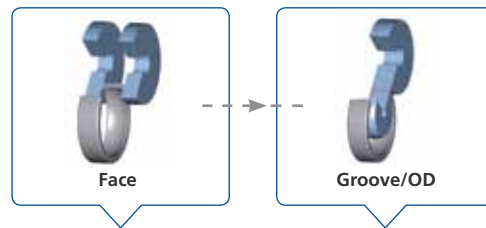
# SRB - Spherical Roller Bearing

## Outer Ring - Grinding process

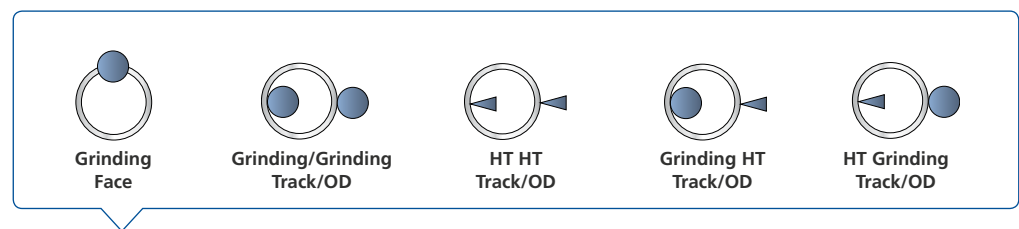
All values are given in mm.



Work Piece $\varnothing$	Width Max	Machine	Machine	Machine
20-240	120	DG400	SUU240B	SUU240A
100-320	140	DG700	SUU320B	SUU320A
150-600	200	DG700	SUU600B	SUU600A



Work Piece $\varnothing$	Width Max	Machine	Machine
80-250	130	DG400	SUUC240
130-600	250	DG700	SUUC600
370-820	180	DG800	SUUC800

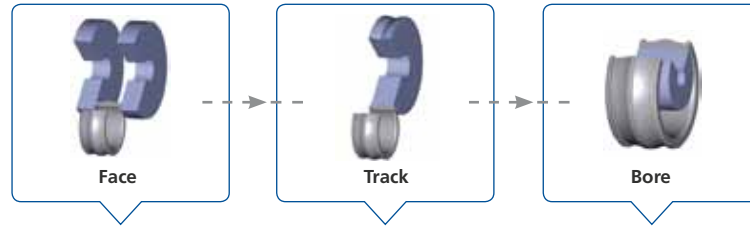


Work Piece $\varnothing$	Width Max	Machine
500-1500	500	VTG1500
1300-4000	500	VTG4000

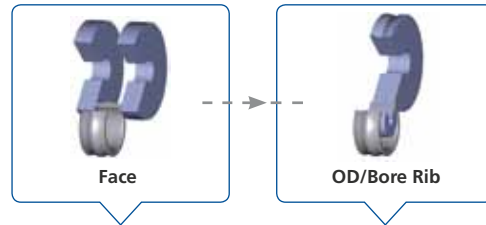


## Inner Ring - Grinding process

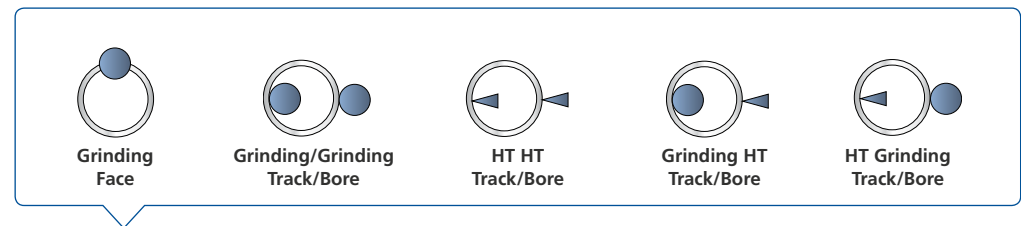
All values are given in mm.



Work Piece $\varnothing$ Width Max		Machine	Machine	Machine
20-240	120	DG400	SUU240B	SUU240A
100-320	140	DG700	SUU320B	SUU320A
150-600	200	DG700	SUU600B	SUU600A



Work Piece $\varnothing$	Width Max	Machine	Machine
80-250	130	DG400	SUUC240
130-600	250	DG700	SUUC600
370-820	180	DG800	SUUC800



Work Piece $\varnothing$	Width Max	Machine
500-1500	500	VTG1500
1300-4000	500	VTG4000



Inner Ring



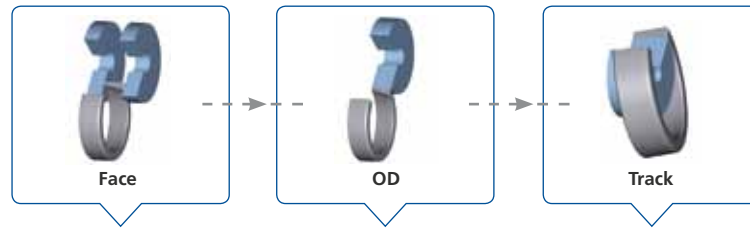
Inner Ring



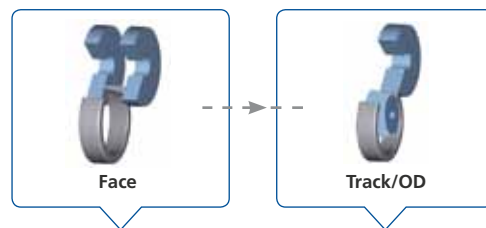
# TRB - Tapered Roller Bearing

## Outer Ring - Grinding process

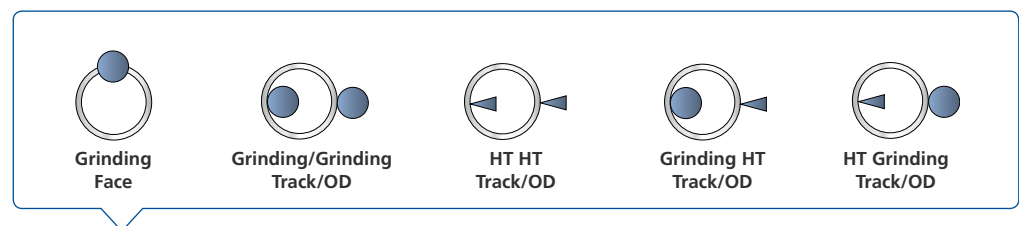
All values are given in mm.



Work Piece $\varnothing$	Width Max	Machine	Machine	Machine
20-240	120	DG400	SUU240B	SUU240A
100-320	140	DG700	SUU320B	SUU320A
150-600	200	DG700	SUU600B	SUU600A



Work Piece $\varnothing$	Width Max	Machine	Machine
80-250	130	DG400	SUUC240
130-600	250	DG700	SUUC600
370-820	180	DG800	SUUC800



Work Piece $\varnothing$	Width Max	Machine
500-1500	500	VTG1500
1300-4000	500	VTG4000



Outer Ring



Outer Ring

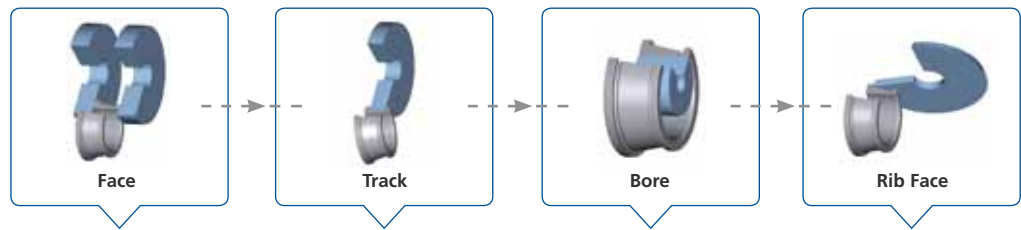


Outer Ring

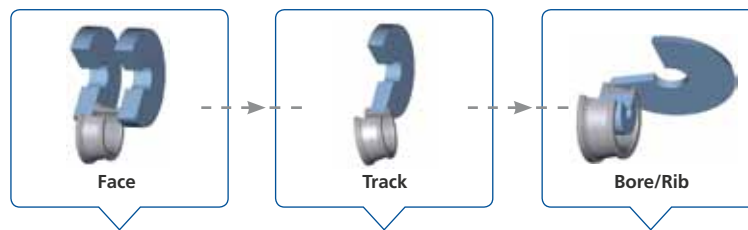


# Inner Ring - Grinding process

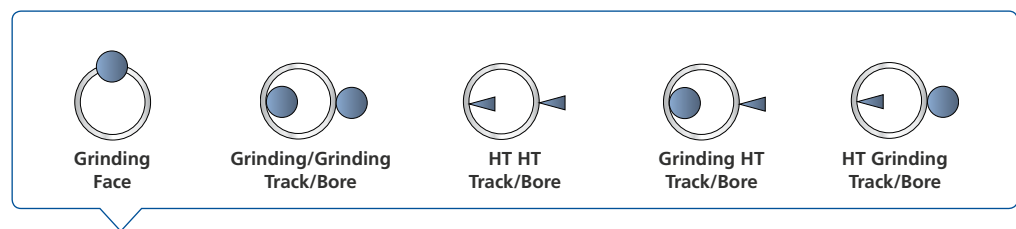
All values are given in mm.



Work Piece $\varnothing$	Width Max	Machine	Machine	Machine	Machine
20-240	120	DG400	SUU240B	SUU240A	SUU240C
100-320	140	DG400	SUU320B	SUU320A	SUU320C
150-600	200	DG700	SUU600B	SUU600A	-



Work Piece $\varnothing$	Width Max	Machine	Machine	Machine
80-250	130	DG400	SUU240B	SUUC240C
130-600	250	DG700	SUU600B	SUUC600C
370-820	180	DG800	-	-



Work Piece $\varnothing$	Width Max	Machine
500-1500	500	VTG1500
1300-4000	500	VTG4000



Inner Ring



Inner Ring



Inner Ring

# KMT Machine Program

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 for face,- internal,- external,- simultaneous,- centerless and hard turning processes.

**LIDKÖPING**

**UVA**  
nomyline

UVA Nomyline External/Internal/Face



LIDKÖPING Double Disc Face



LIDKÖPING Vertical External and Internal



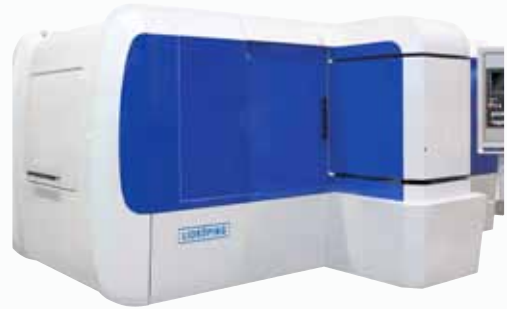
LIDKÖPING Centerless



LIDKÖPING External and Internal



LIDKÖPING Simultaneous External and Internal



LIDKÖPING External



Lidköping Internal



LIDKÖPING/UVA Internal



# Worldwide Aftermarket services



## Field Service

- Emergency support
- Production support
- Preventive maintenance
- Inspection and analysis

## Spare parts

- Original parts for UVA and LIDKÖPING

## Tooling

- New design
- Tool spare

## Repairs

- Spindles, slides and circuit boards etc

## Upgrades

### LIDKÖPING

- UPS Power Backup Solution
- Ballscrew & Harmonic Drive (Centerless)
- Control System
- Acoustic Emission

### UVA

- Upgrade to CMP-70
- Vacuum Loading
- Cycle Time
- Direct Driven Workhead
- Servo Optimization
- New control panel UVATRONIC



## Rebuilds

Complete rebuild of old generation grinding machines



## Training

- Grinding
- Mechanics
- Electrical and electronic
- Maintenance and preventive maintenance

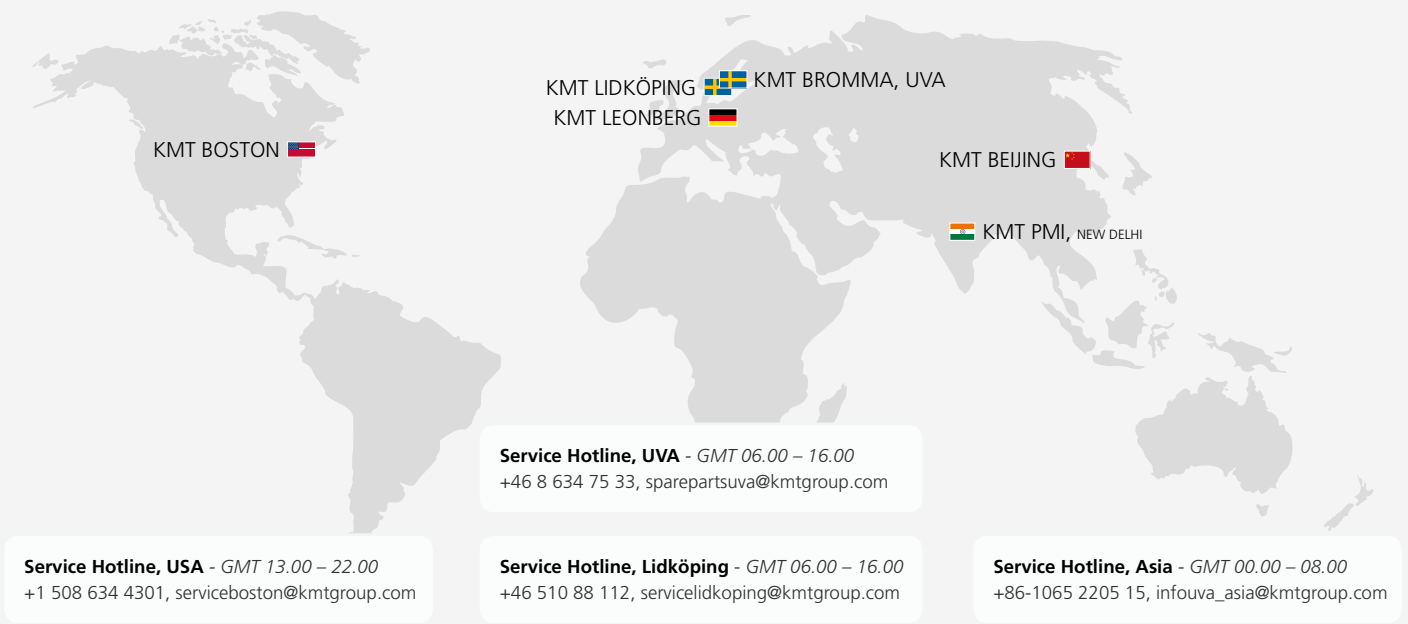
## Service Hotline

	Phone	Fax	E-mail
UVA, GMT 06.00 – 16.00	+46 8 634 75 33	+46 8 634 75 75	sparepartsuva@kmtgroup.com
Lidköping, GMT 06.00 – 16.00	+46 510 88 112	+46 510 88 042	servicelidkoping@kmtgroup.com
USA, GMT 13.00 – 22.00	+1 508 634 4301	+1 508 634 4196	serviceboston@kmtgroup.com
Asia, GMT 00.00 – 08.00	+86-1065 2205 15	+86-1065 2206 63	infouva_asia@kmtgroup.com





# KMT Precision Grinding



## Manufacturing, Sales & Service

### **KMT Precision Grinding AB, Bromma UVA, Sweden**

PO Box 11 153, SE-161 11 BROMMA, Sweden  
Phone: +46 8-634 75 00, Fax: +46 8-634 75 75  
E-mail: infouva@kmtgroup.com

### **KMT Precision Grinding AB, Lidköping, Sweden**

P.O. Box 910, SE-531 19 LIDKÖPING, Sweden  
Phone: +46 510 88 000, Fax: +46 510 24 541,  
E-mail: infolidkoping@kmtgroup.com

### **KMT Production Machinery India Pvt. Ltd.**

143 ,Sector 7, IMT Manesar,Gurgaon - 122050, India  
Phone: +91 124 4368361, Fax : +91 124 4368360  
E-mail: infoindia@kmtgroup.com

## Sales & Service

### **KMT Precision Grinding, Inc., Boston, USA**

Milford Industrial Plaza 4 Industrial Road,  
Suite 3 Milford, MA. 01757  
Phone: +1 508 634 4301, Fax: +1 508 634 4196  
E-mail: infoboston@kmtgroup.com

### **KMT Precision Grinding Technology Co., Ltd, Beijing, China**

Beijing Representative Office Room 1405, SCITECH Tower No.  
22 Jian Guo Men Wai Da Jie BEIJING 100004  
Phone: +86-1065 2205 15, Fax: +86-1065 2206 63  
E-mail: infouva\_asia@kmtgroup.com

### **KMT Precision Grinding GmbH**

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