

# MECHANICAL PRODUCTION UNIT

Contract production  
for your company

Mechanical production for  
components, assemblies  
and systems

OUR  
MACHINES  
WORK FOR  
YOU

# JOB ORDER PRODUCTION AT KOLBUS

Our Machining Shop offers added-value services for components to your design specifications.

Advantages and capabilities for your company in the following fields:

**CNC MILLING/DRILLING**

**CNC TURNING**

**CNC GRINDING**

**SHEET METAL PROCESSING**

We can provide any type of surface treatment thanks to long-term relationships with partners across the region.

We will produce batch sizes from one to medium-volume production runs.

The highly trained employees in our Mechanical Production unit are committed to assuring highly reproducible, cost competitive processing for your projects.

- o Fast quotes and order processing
- o Resolve your order bottlenecks without investing in extra capacity
- o Get assembly-ready components (from intermediates to finished part) or custom machining
- o Call on KOLBUS capacity and resources as and when you need them
- o Lower manufacturing costs through optimized manufacturing
- o We also offer non-company manufacturing processes
- o Avoid tying up capital and incurring fixed costs for production machinery

**Decades of experience in metal processing – boring, milling, turning and sheet metal forming – make KOLBUS a strong and reliable partner.**

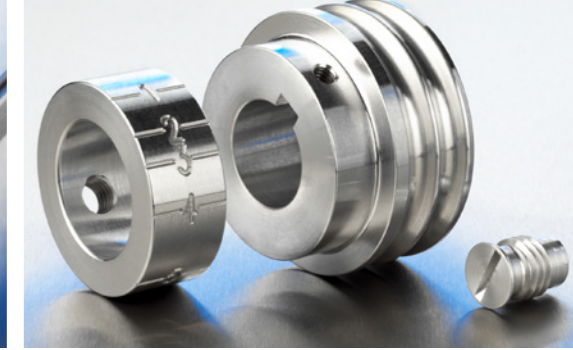
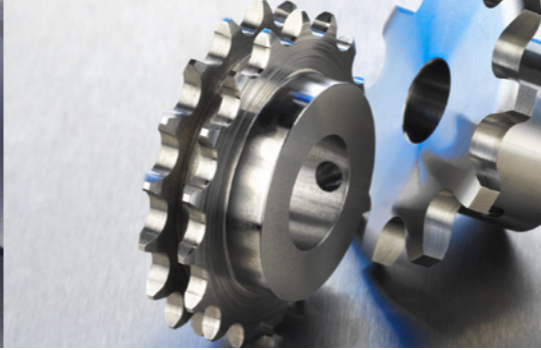
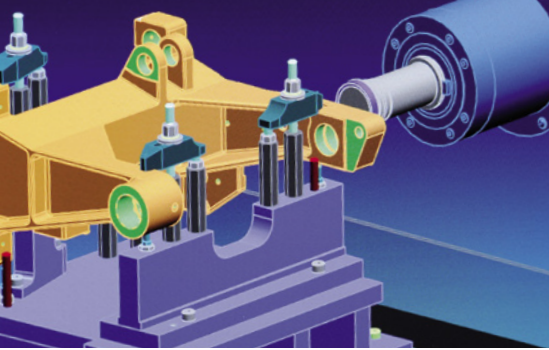
**Benefit from our know-how by outsourcing your casting to our foundry for subsequent machining by our Mechanical Production unit.**

**This will reduce the number of interfaces and order lead times in your procurement process.**



## CNC MILLING, DRILLING

			Table size in mm	Travel in mm	Tool magazine	Part size max. in mm
<b>Large part machining centres</b>						
1 x	<b>Droop &amp; Rein – TFS</b> Gantry design	5-axis BAZ with fork-type milling head (B- and C-axis)	X = 5,000 Y = 1,800	X = 6,000 Y = 3,000 Z = 1,100	370 Stations	
1 x	<b>Soraluce – TR 45</b> Bed-type, milling and drilling machine	5-axis BAZ with 45° milling head (stepless deviding)	X = 4,860 Y = 1,200	X = 4,500 Y = 1,500 Z = 2,100	80 Stations	
1 x	<b>Unisign – Univers 6000</b> 2 work areas (shuttle operation)	3-axis BAZ with replaceable angle head	X = 4,000 Y = 1,000	X = 4,500 Y = 1,000 Z = 550	160 Stations	X = 3,960 Y = 940 Z = 400
<b>Vertical machining centres</b>						
1 x	<b>Unisign – Unipro 5L</b> 2 work areas (shuttle operation)	4-axis BAZ with swivel table (A-axis)	X = 2,150 Y = 400	X = 2,160 Y = 600 Z = 500	188 Stations	X = 2,000 Y = 400 Z = 280
2 x	<b>Unisign – Unipro 5P</b> 2 work areas (shuttle operation)	5-axis BAZ with rotary/swivel table (B- and C-axis)	X = 630 Y = 630	X = 1,000 Y = 800 Z = 500	163 Stations	X = 630 Y = 630 Z = 350
5 x	<b>DMG – DMC 1450V</b>	3-axis BAZ	X = 1,760 Y = 750	X = 1,450 Y = 700 Z = 550	40 Stations	
2 x	<b>DMG – DMC 1150V</b>	3-axis BAZ	X = 1,400 Y = 750	X = 1,150 Y = 700 Z = 550	60 Stations	
1 x	<b>Anayak – Performer 2500</b>	3-axis BAZ with manual swivel head (B- and C-axis)	X = 2,700 Y = 840	X = 2,500 Y = 1,000 Z = 1,100		
4 x	<b>Anayak – VH 1800</b>	3-axis BAZ with manual swivel head (B- and C-axis)	X = 1,800 Y = 750	X = 1,600 Y = 800 Z = 800		
<b>Horizontal machining centres (flexible manufacturing system)</b>						
3 x	<b>Makino – A 99e</b> Machines linked using Fastems pallet storage – 46 machine pallets – 88 material pallets	4-axis BAZ with NC rotary table (B-axis)	X = 800 Y = 800 (pallet)	X = 1,250 Y = 1,100 Z = 1,250	244 Stations per machine	
3 x	<b>Makino – A 77e</b> Machines linked using Fastems pallet storage – 48 machine pallets – 78 material pallets	4-axis BAZ with NC rotary table (B-axis)	X = 500 Y = 500 (pallet)	X = 730 Y = 730 Z = 800	243 Stations per machine	



## MILLING, BORING

### Machines for long workpieces

		Table size in mm	Travel in mm
1 x	<b>Reichle &amp; Knödler</b> Including planing facility		X = 4,000 Y = 1,500 Z = 1,000

### Boring system

1 x	<b>Scharmann – FB 90 Opticut</b>	Spindle diameter: 110 mm Deep-hole drilling: up to 500 mm	X = 800 Y = 1,000	X = 1,000 Y = 1,200 Z = 950
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## CNC TURNING

### Turn-mill centre

		Main spindle/ Max. Ø clamping chuck in mm	Max. turning diameter in mm	Max. turning length in mm
1 x	<b>Boehringer – VDF 32 M</b> 2 turrets, tool stations per turret: 12 (6 max. driven)	500	440	1,900

### Turning and milling centre

1 x	<b>Index – G250</b> 1 turret, 1 multifunction head (milling spindle and turret) Tool stations per turret: 12 (all driven)	Main and counter spindle (2 x clamping chuck), External magazine with 64 tool stations Automatic workpiece transfer, tool carrier travel Z = 1,400 mm X = 300 mm	250	250	350
1 x	<b>DMG CTX beta 800</b>	Main spindle, C-axis, Y-axis tailstock (programmable)	410	410	850
1 x	<b>Boehringer – VDF 250-2/2T</b> 2 turrets, tool stations per turret: 12 (all driven)	Main spindle, C-axis, Y-axis tailstock (programmable), steady rest (Ø 12 – 152 mm, programmable)	215	215	1,000

### Production turning machines

			Bar feeder in mm	Max. bar diameter in mm	Max. turning length in mm
1 x	<b>Index – C42</b> 3 turrets, tool stations per turret: 12 (all driven)	Main and counter spindle (2 x clamping chuck), C-axis, Y-axis, Automatic workpiece transfer and removal	bis 1,000	42	150
1 x	<b>Index – C200</b> 3 turrets, tool stations per turret: 14 (all driven)	Main and counter spindle (2 x clamping chuck), C-axis, Y-axis, Automatic workpiece transfer and removal	bis 1,000	65	300

## TURNING

### Turning lathe

		Main spindle, Max. Ø clamping chuck in mm	Max. turning diameter in mm	Max. turning length in mm	
1 x	<b>Voest Alpine Steinel – E50</b> Cycle-controlled	Main spindle, Follow rest (Ø 12 – 125 mm), Steady rest (Ø 20 – 280 mm), Tailstock	450	550	2,000
5 x	<b>Weiler – E50</b> 4 tool clamping stations (manual) Cycle-controlled	Follow rest (Ø 12 – 125 mm), Steady rest (Ø 20 – 280 mm), Tailstock	250	330	1,000

### Vertical turning lathe

1 x	<b>Dörries – SD 80</b>		1,000	400
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## GRINDING

### CNC cylindrical grinding machine

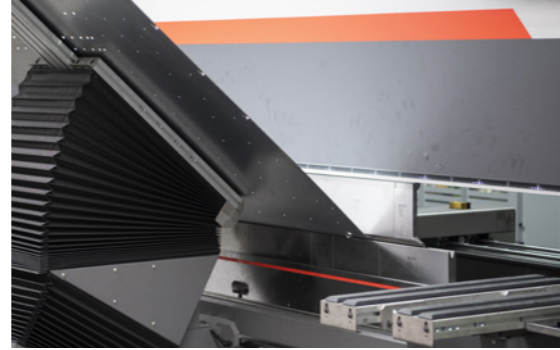
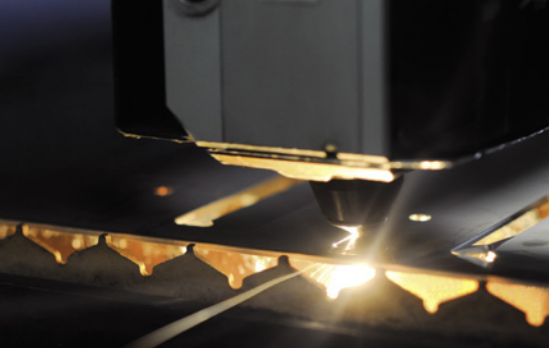
			Max. grinding diameter in mm	Max. grinding length in mm
1 x	<b>Kellenberger – Kel-Varia UR</b> Internal grinding attachment	Arobotech Lünette	349	1,500

### Cylindrical grinding machine

1 x	<b>TOS – 2Ud 750</b>		150	700
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### Surface grinding machine

			Travel in mm
1 x	<b>Hauni/Blom – HF 512</b>		X = 1,200 Y = 500 Z = 480



## SHEET METAL FORMING

<b>Laser centre</b>		Sheet size in mm	Sheet thickness in mm
1 x	<b>Trumpf – TruLaser 5030 classic</b> High-performance laser cutting system (6 kW)	Automatic loading via warehouse connectivity (ByCell 3015) with 56 sites 3,000 x 1,500	Max. 20 (mild steel) Max. 14 (aluminium) Max. 15 (stainl. steel)
<b>CNC press brakes</b>		Working length in mm	Sheet thickness in mm
1 x	<b>Bystronic – Beyeler Expert 200</b>	Pressing force: 200 t 4,100	Max. 6
1 x	<b>Bystronic – Xpert 200/3100</b>	Pressing force: 200 t 3,100	Max. 6
1 x	<b>SafanDarley E-Brake 35-1250</b>	Pressing force: 35 t 1,250	Max. 6
<b>Guillotine shears</b>			
1 x	<b>LVD – HST 31/6</b>	3,100	Max. 6.35 mm (St37)
<b>Sheet folding machine</b>			
1 x	<b>Fasti – 212/10</b>	3,000	Max. 4
<b>Brush sanding machine</b>		Sheet size in mm	Sheet thickness in mm
1 x	<b>Fladder – Gyro 300</b>	3,000 x 1,500	> 3 mm (descaling)
<b>Welding stations, various</b>			
<b>MIG</b>			
<b>MAG</b>			
<b>Stud welding</b>			
<b>Spot welding</b>			

## OTHER

<b>Broaching machine</b>		Width in mm	Length in mm
1 x	<b>Wewag</b>	Min. 3 Max. 32 (only GG)	Max. ca. 150
<b>Marking laser</b>		Labelling field in mm	
1 x	<b>TFT – LSM 1500</b> – Dividing head – various labelling procedures	110 x 110	
<b>Marking machine (vertical)</b>			
2 x	<b>JR Richter – Unigrav GM 300</b> – Depth engraving – Scale engraving – Pattern engraving	300 x 200	

## QUALITY ASSURANCE

<b>3D-CNC-Measuring machine</b>		Measuring range in mm	Measuring accuracy in µ per metre measuring path
1 x	<b>DEA – Global Advantage</b> Probe: Renishaw Sival rotary probe	X = 1,500 Y = 2,600 Z = 1,350	3.50 + 4.00
1 x	<b>Hexagon Global S</b> Probe: Renishaw Sival rotary probe	X = 900 Y = 1,500 Z = 800	
<b>Measuring machine</b>			
1 x	<b>Tesa – Micro – MS 454</b> Hand-held 3D-coordinate machine	X = 500 Y = 500 Z = 300	
1 x	<b>Hexagon – Absolute Arm 8525</b> 3D measuring arm / tactile measuring and contactless scanning	Measuring volume 2,500 mm	
<b>Surface testing</b>			
1 x	<b>Mitutoyo Surftest SV-500</b> Stationary surface roughness measuring device		
<b>Hardness tests</b>			
1 x	Testing procedures in accordance with Vickers, Rockwell and Brinell		



## Your contacts

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