

## OERLIKON BEVEL GEAR CUTTING MACHINE C 60

This machine covers the upper application range of the Oerlikon bevel gear cutting machine C series. Its field of application is cutting bevel gears for heavy trucks and tractors. The C 60 follows the proven design of all C machines. With the C 60, particular value is placed on high static and dynamic rigidity. This can also be seen externally, in the extremely rigid and generous dimensioning of the machine elements. The proof is provided by the gear cutting performances and quality.

The need for particularly high system rigidity is based on – amongst other things – the extremely broad range of requirements placed on a large machine for cutting bevel gears. On the one hand, the batch sizes are smaller in comparison with passenger vehicle gears, while on the other hand, the tool investments are higher. As a result, the feasibility calculation often prescribes the further use of existing HSS tool systems, through to broaches (Single Cycle).

Naturally, a modern gear cutting machine must also permit the unlimited use of HM tool systems for dry processing, without compromise. These requirements alone result in a cutting speed range from 20 m/min through to 300 m/min. The Oerlikon C 60, with its 42 kW cylindrical gears for tool and workpiece drive, covers all of these requirements.



### AT A GLANCE

- 6-axis CNC machine for high-efficient bevel gear cutting
- Tried-and-tested axis concept for compact design
- High-performance tools made of carbide
- Short retooling times thanks to ergonomic machine design
- Unrivaled gearing and surface quality
- Energy-efficient (e<sup>2</sup>)



**RANGE OF APPLICATION**

	<b>C 60</b>	
	<b>CONTINUOUS INDEXING</b>	<b>SINGLE INDEXING</b>
<b>Workpiece data</b>		
<b>Workpiece diameter (max.)</b>	Ø 630 mm	
<b>Normal module range (min. – max.)</b>	3.5 – 10 mm	
<b>Tooth width (max.)</b>	100 mm	
<b>Smallest/largest spiral angle</b>	0°/60°	
<b>Smallest/largest number of teeth</b>	6/180	
<b>Smallest/largest gear ratio</b>	1:1/1:10	
<b>Tool data</b>		
<b>Cutter head radius/cutter head diameter</b>	88 – 181 mm	7.5" – 18"
<b>Cutter head spindle (A axis)</b>		
<b>Seating diameter Gleason outer cone No. 14; 1:24</b>	Ø 58.227 mm	
<b>Cutter head spindle speed (max.)</b>	330 rpm	
<b>Workpiece spindle (B axis)</b>		
<b>Seating diameter: Oerlikon inner cone, No. 80; 1:16</b>	Ø 203.218 mm	
<b>Workpiece spindle opening</b>	Ø 190 mm/650 mm long	
<b>Workpiece spindle speed (max.)</b>	450 rpm	
<b>Total connected load</b>	100 kVA	
<b>Machine dimensions (L x W x H) approx.</b>	6,165 x 3,600 x 3,200 mm	
<b>Net weight approx.</b>	35,000 kg	

The above-mentioned maximum values were determined for industry-typical gear units. Further testing may be required to determine whether maximum values can be combined.

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