

# TTL APPLICATIONS DEMO

# TTL SERIES

TTL 52 / TTL 66 MODELS



# INTRODUCTION

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CMZ presents their new **CNC lathe series TTL**. This is a new generation of lathe that can be included in the **multiturret range** together with the TX series. Its rapid speed of 30m/min, milling capacity up to 12,000rpm and machine bed inclination of 60° makes it ideal for bar work. The lathe consists of two lathes, both being able to work in the two spindles; both of them can be configured with live tooling and Y axis. It also has a subspindle that can move vertically and horizontally (X3, Z3). This last function **makes possible to turn with three tools simultaneously**, being able to reduce cycle time. Additionally, the TTL offers other interesting accessories for different types of industries; the lathe can be equipped with a tailstock over the subspindle which allows to machine long parts in the main spindle while the lower turret is finishing the part in the subspindle which makes it ideal for **shaft machining**.

The **TTL series** also helps with **process automation** as it can be fitted with a pneumatic parts catcher, bar remnant collector or a gantry robot and workstocker for shafts and billets like in other CMZ series.

This document tries to summarise the different examples of use to show the possibilities of the new TTL series. In summary the examples are the following:

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- **Working with subspindle displaced downwards**
  - **Machining with two turrets in the same spindle**
  - **3 tools working simultaneously**
  - **Functioning with tailstock (option)**
  - **Synchronous machining with two turrets (the movements are only programmed in one turret and the other follows)**
  - **Pneumatic parts catcher**
  - **Bar remnant collector**
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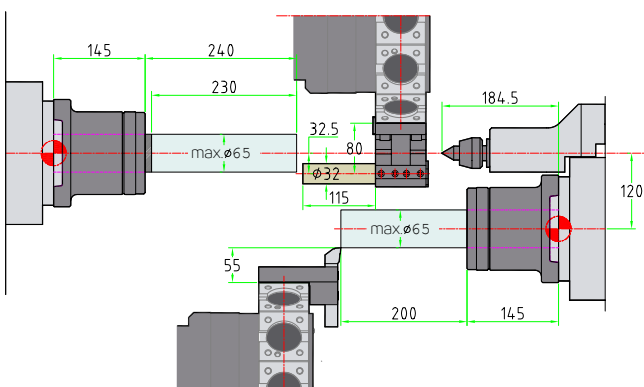
With the TTL series you will be able to **optimise your machining processes**, do not hesitate in contacting us for more information.



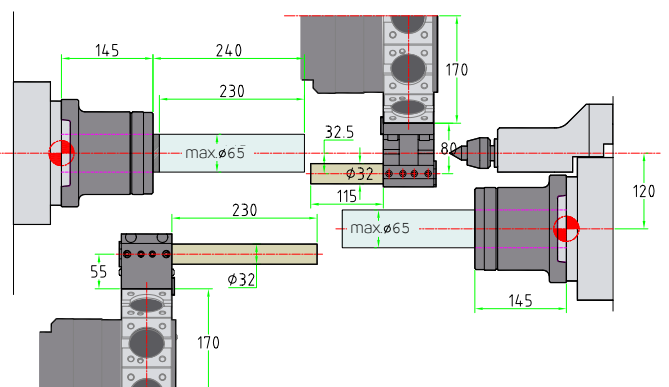
## Working with subspindle displaced downwards

The displacement of the subspindle below the main spindle reduces significantly the interference between the two turrets and the spindles.

The machine is much easier to program and prepare.



The displacement of the subspindle reduces interference.

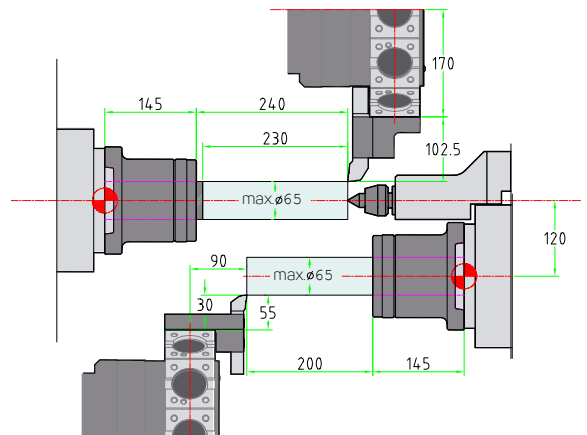
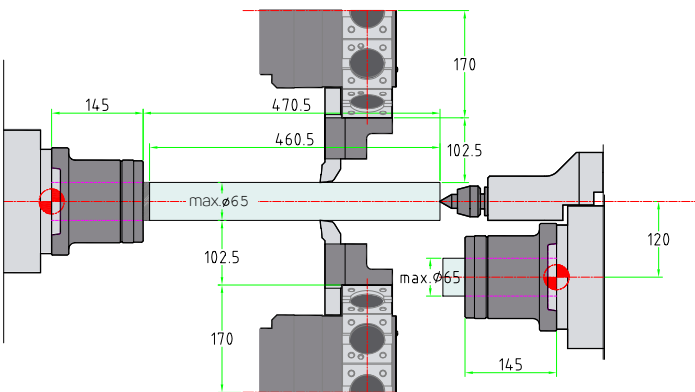


The displacement of the head allows machining with very long components.



## Functioning with tailstock (option)

The machine allows to work in the subspindle while hold the piece with the tailstock.

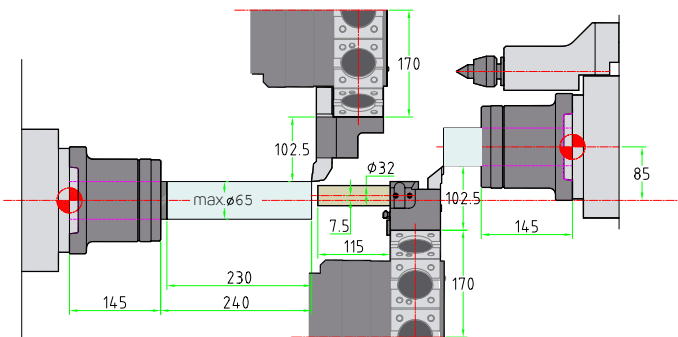
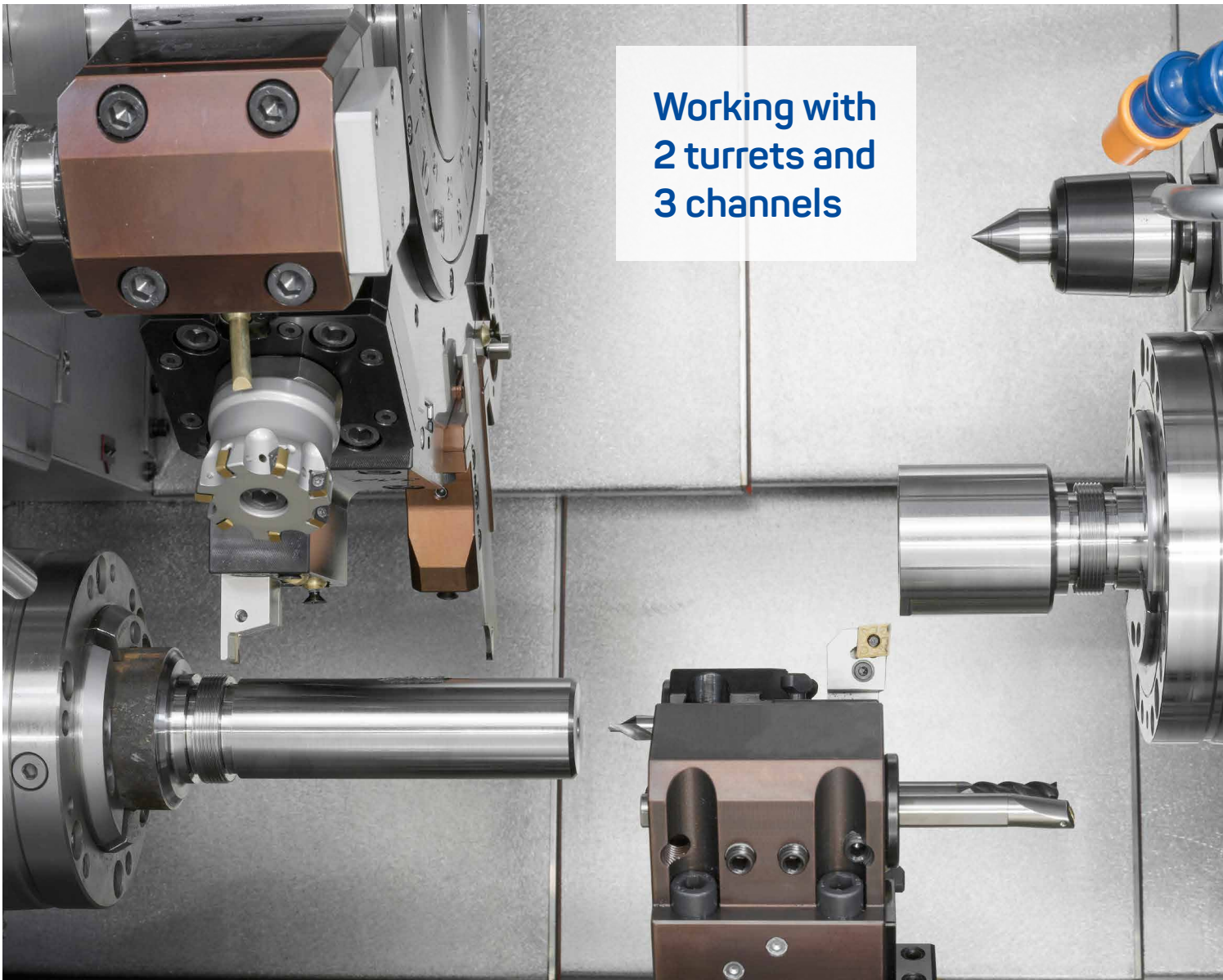


The balanced cutting reduces vibrations and allows increased material removal.

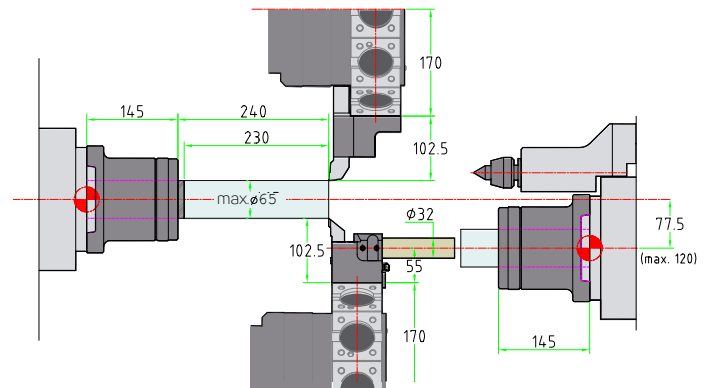
The machine can finish the part in the subspindle while we turn between spindle and centre.



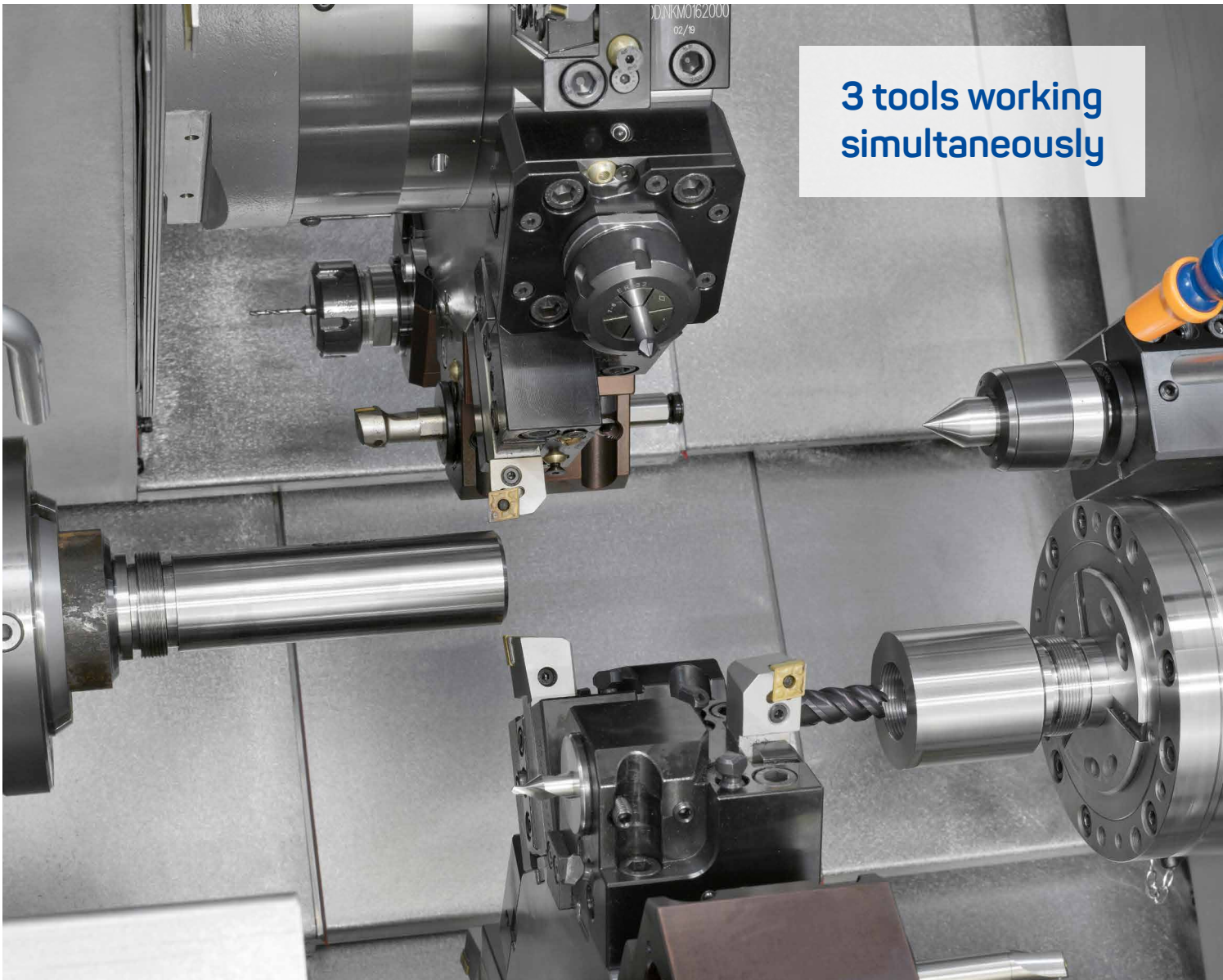
## Working with 2 turrets and 3 channels



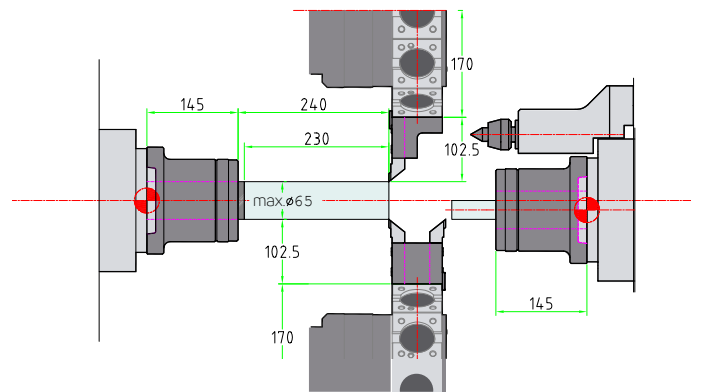
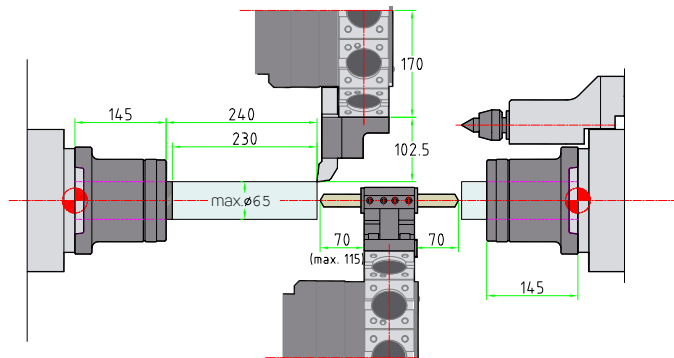
The large travel of the subspindle allows the simultaneous work of 3 tools in very varied conditions.



The third CNC channel gives us the flexibility to program multiple applications using simultaneously 3 tools.



3 tools working simultaneously



A turret can drill simultaneously using the 2 spindles without programming limitations.

Any shape can be turned in the subspindle, while the same turret works in the main spindle.

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