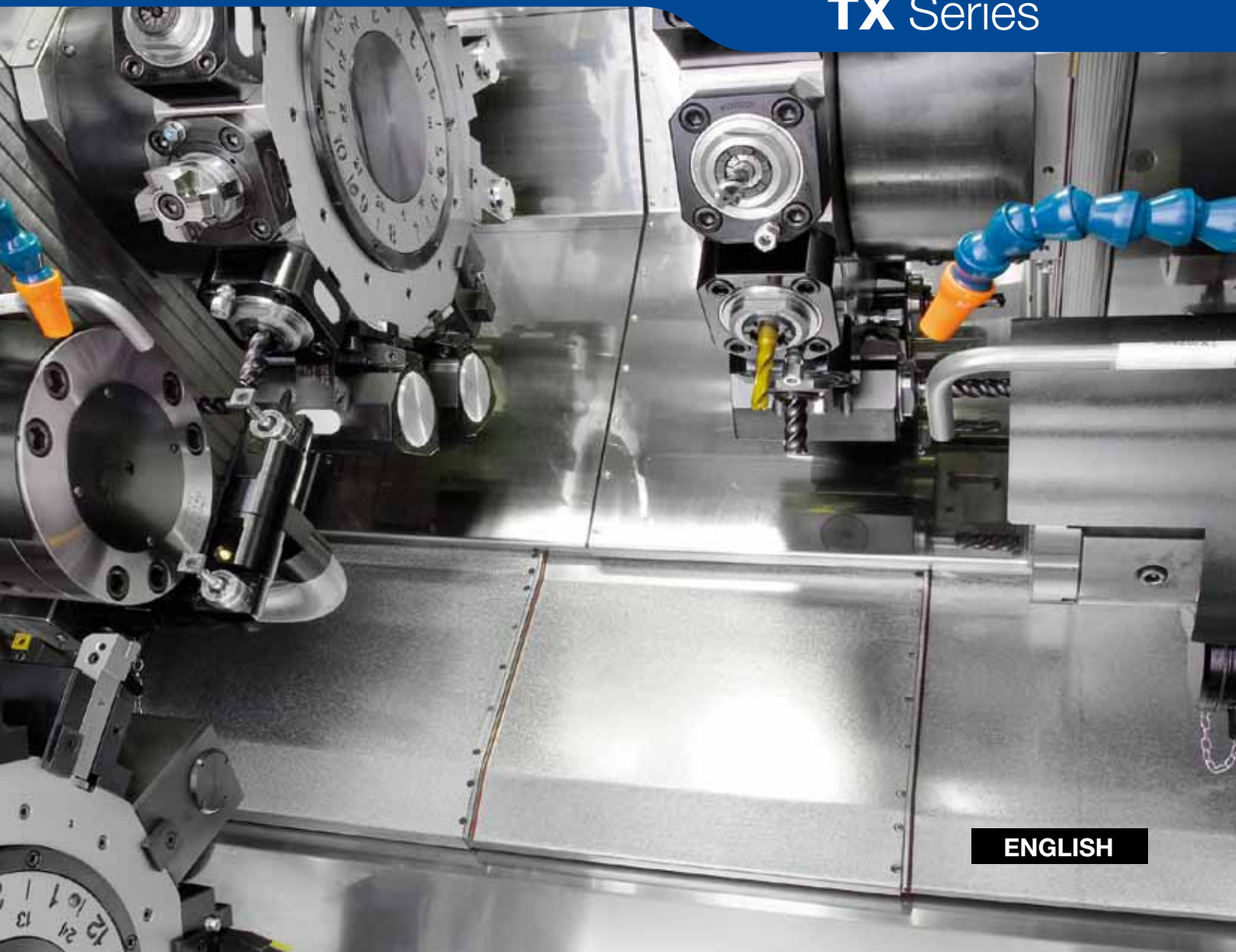




**CMZ Machinery Group, S.A.**

**TX Series**



**ENGLISH**

**Model range**

- TX 66 Y3
- TX 66 Y2 Quattro
- TX 66 Y2 Twin
- TX 52 Y3
- TX 52 Y2 Quattro
- TX 52 Y2 Twin



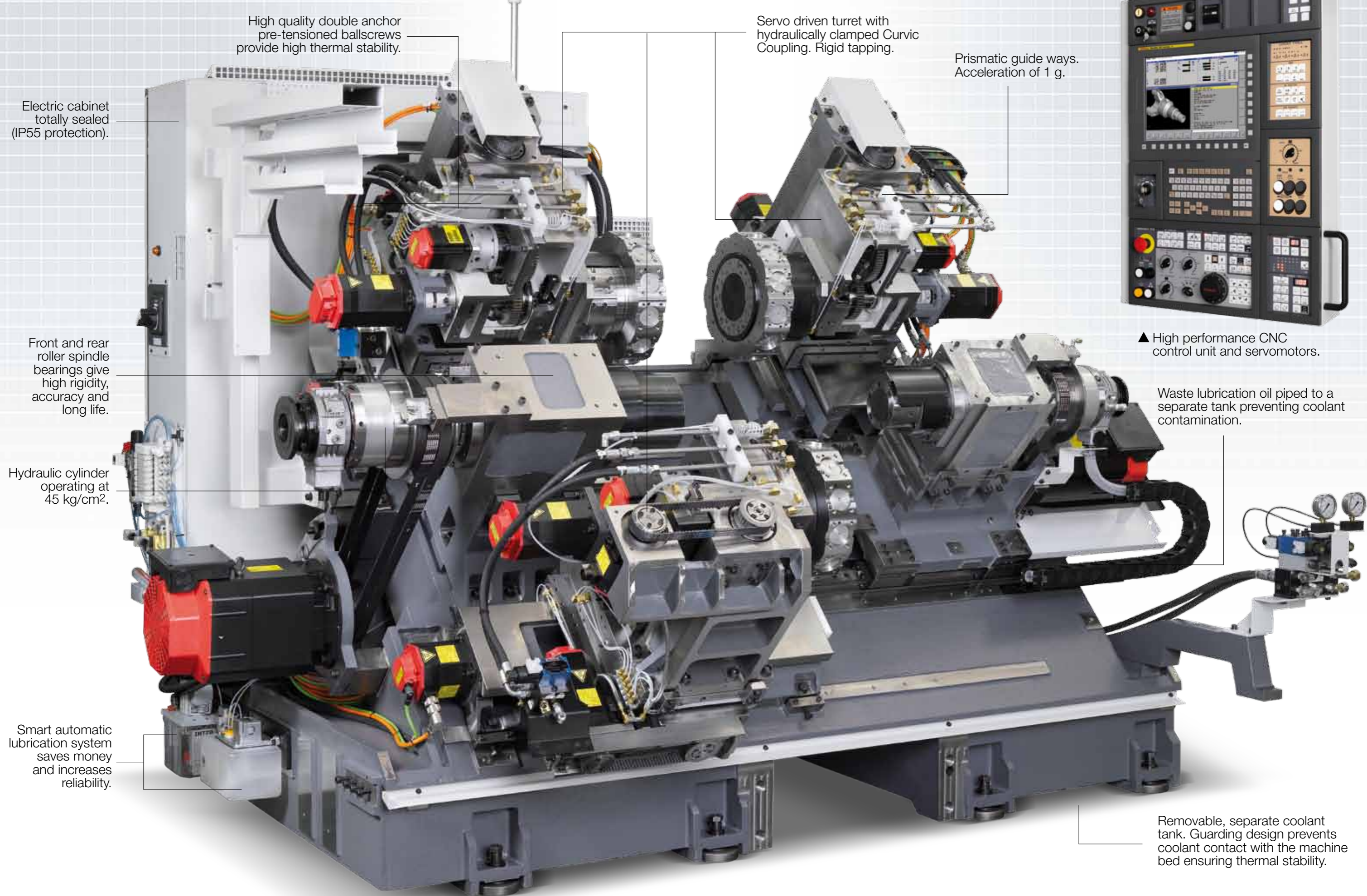
**TX66 Y3**  
CMZ Machinery Group

**CMZ TX Series**

**CMZ**  
Machinery Group

**CMZ**

# High performance from within



High quality double anchor pre-tensioned ballscrews provide high thermal stability.

Electric cabinet totally sealed (IP55 protection).

Front and rear roller spindle bearings give high rigidity, accuracy and long life.

Hydraulic cylinder operating at 45 kg/cm<sup>2</sup>.

Smart automatic lubrication system saves money and increases reliability.

Servo driven turret with hydraulically clamped Curvic Coupling. Rigid tapping.

Prismatic guide ways. Acceleration of 1 g.

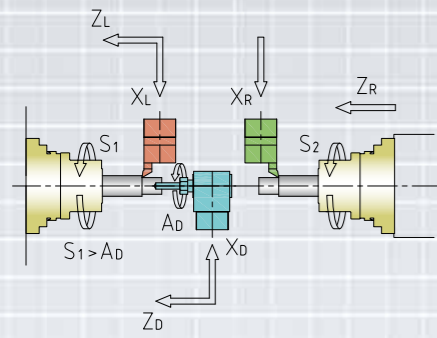
▲ High performance CNC control unit and servomotors.

Waste lubrication oil piped to a separate tank preventing coolant contamination.

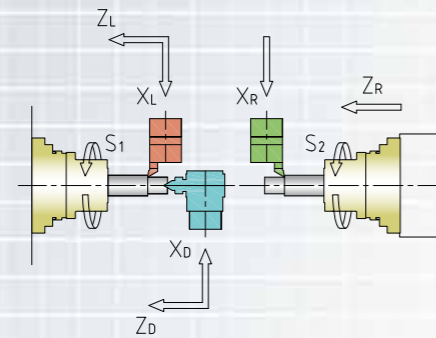
Removable, separate coolant tank. Guarding design prevents coolant contact with the machine bed ensuring thermal stability.

## Examples of Simultaneous Machining

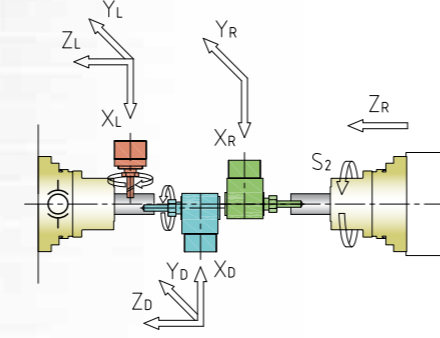
Differential Cut



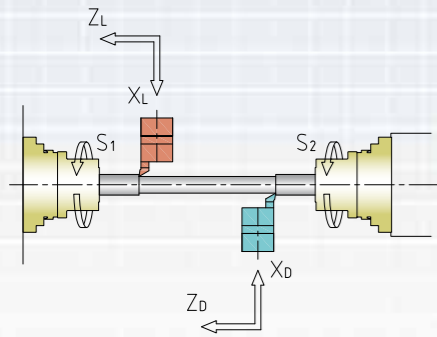
Center Support



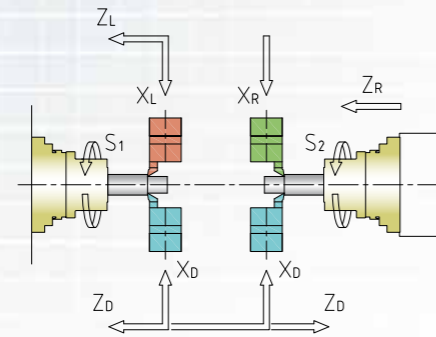
Drilling & Tapping



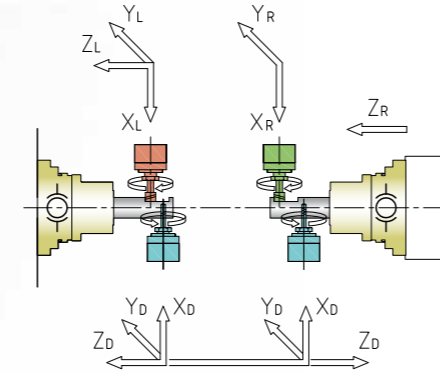
4-Axis Turning



6-Axis Turning



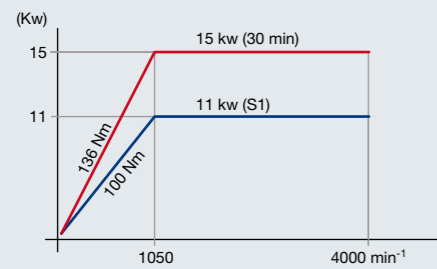
9-Axis Combined



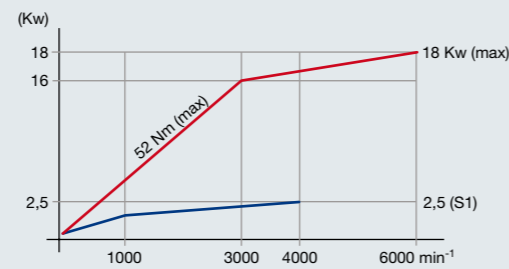
**3x High rigidity  
24 position turrets**

- 3x  $\pm 40$  mm Y axis
- 2x spindle with full C axis
- 3x 18 Kw 52 Nm Milling Motors
- 18x CNC controlled axes

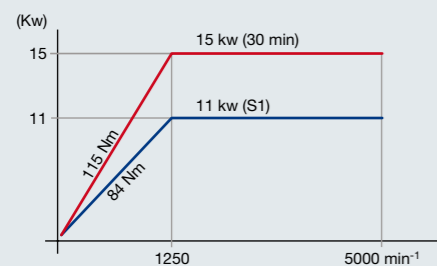
TX-66 Left Spindle



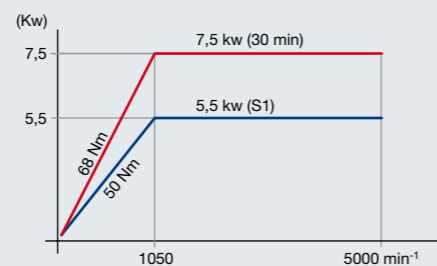
DRIVEN TOOLS POWER (ON 3 TURRETS)



TX-52 Left Spindle

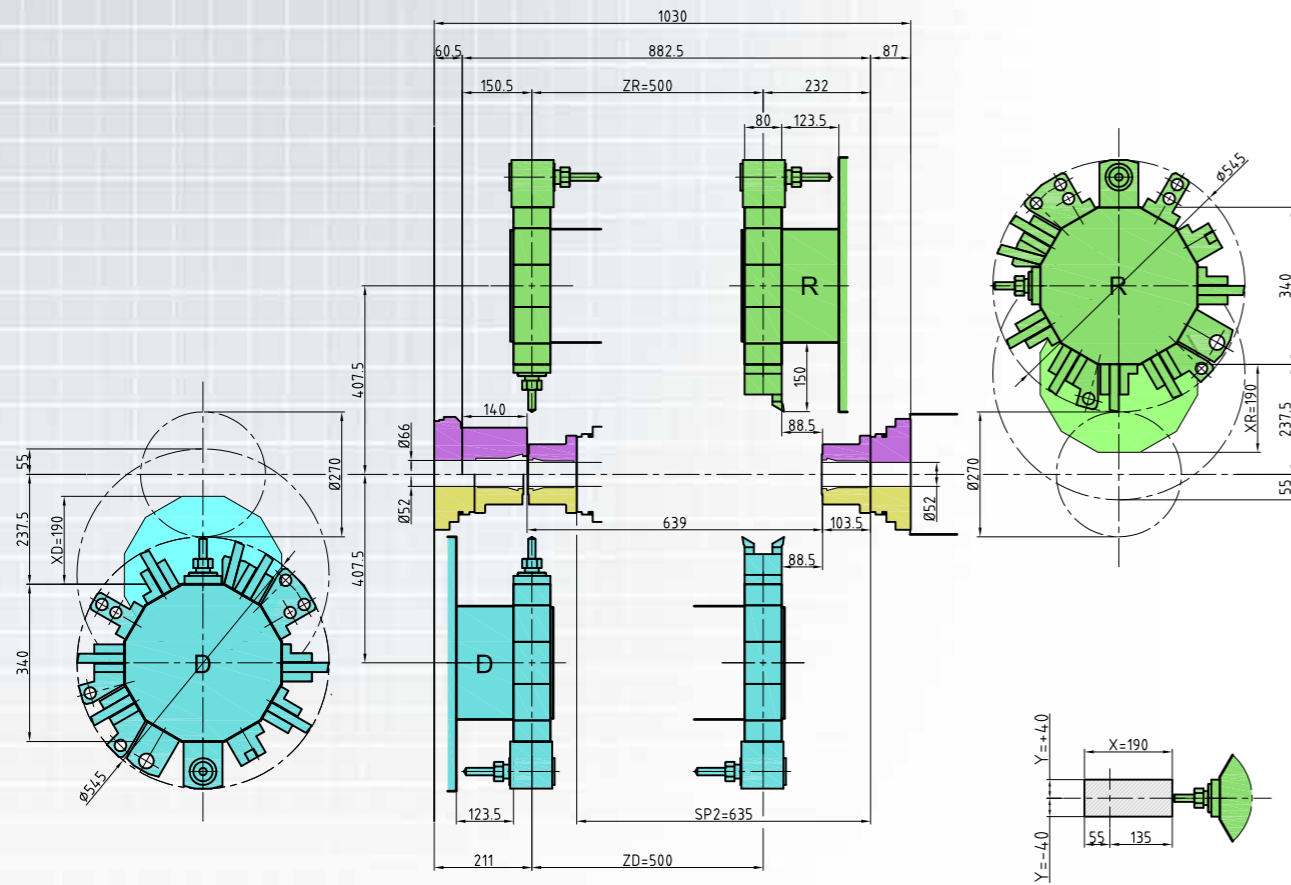


TX Right Spindle

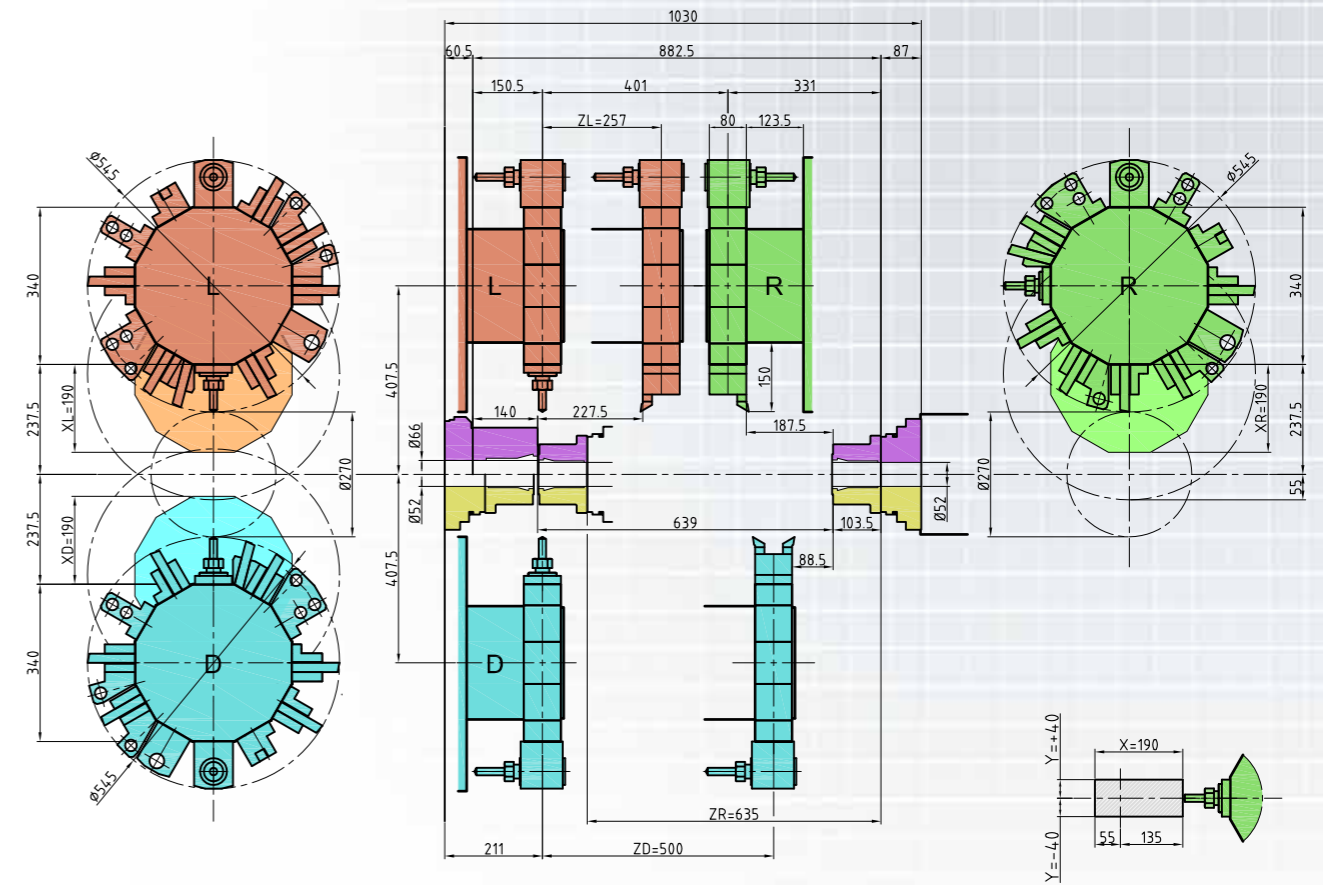


# Travels & Interferences

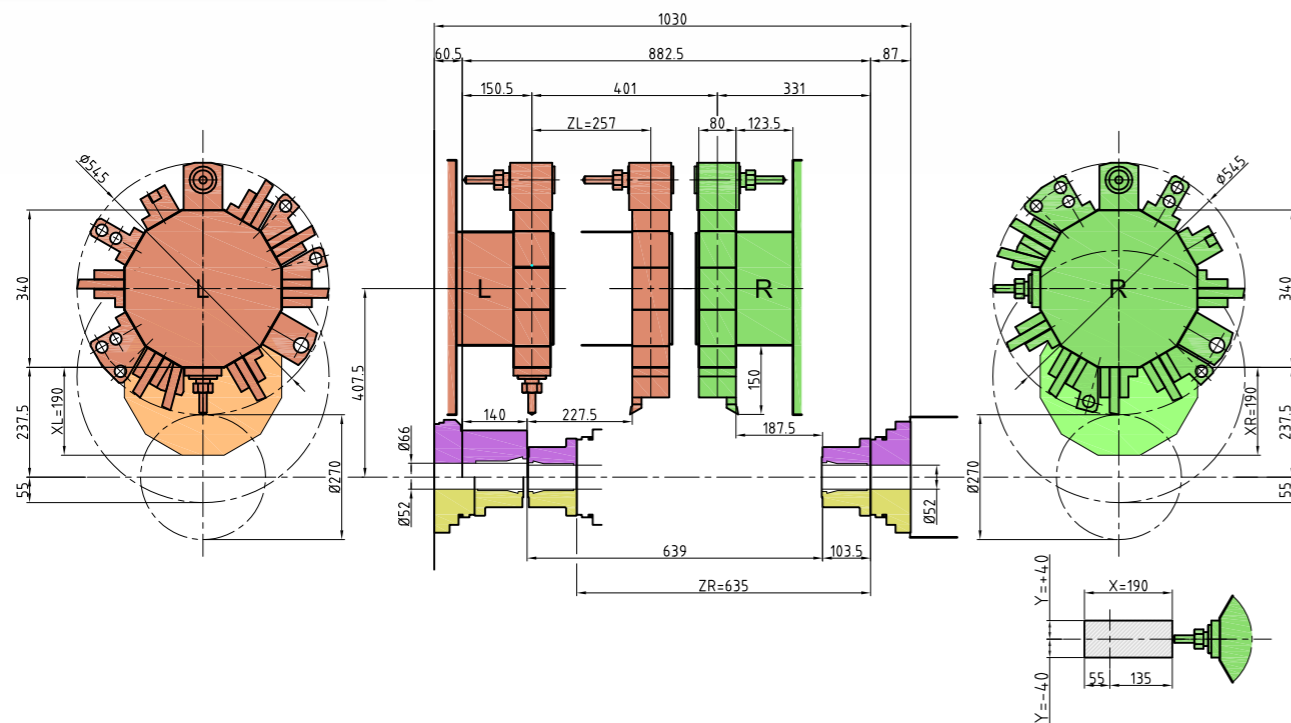
TX-66-Y2 Quattro



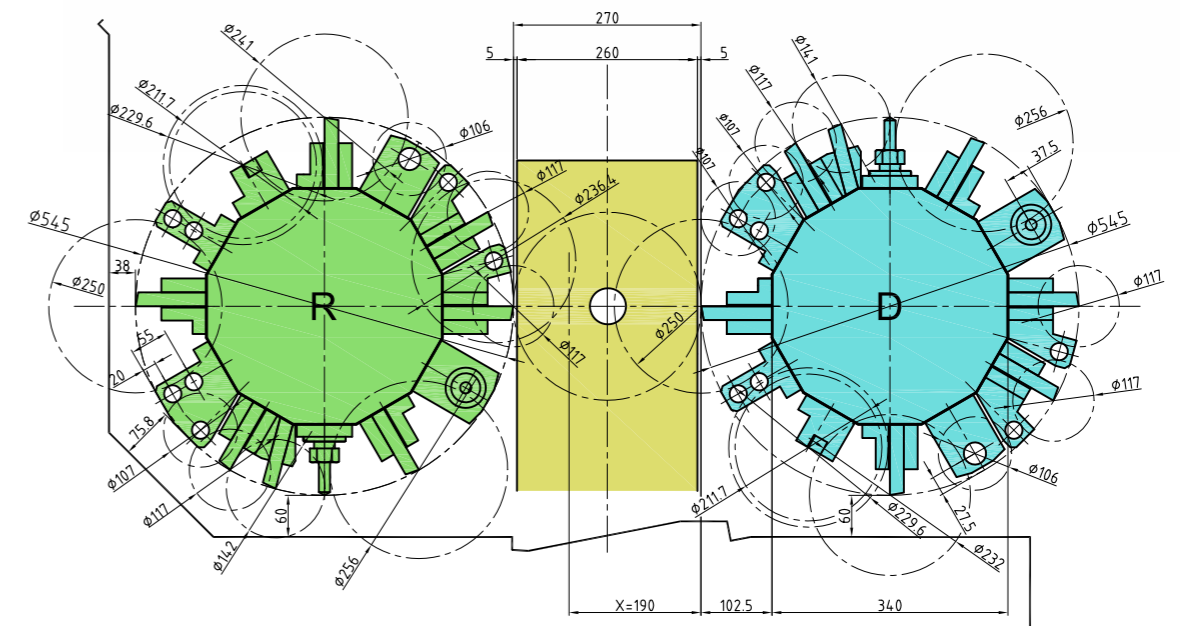
TX-66-Y3



TX-66-Y2 Twin



Tooling interferences



## Automate your production with the CNC controlled automatic parts loader

**Large capacity loader.**

The loader arm is fitted with twin grippers that can carry two components up to 3kg each and up to 150mm diameter. Having twin grippers means that both the raw and finished part can be carried at the same time. This reduces the loading time and minimises the distance that the loader has to travel.

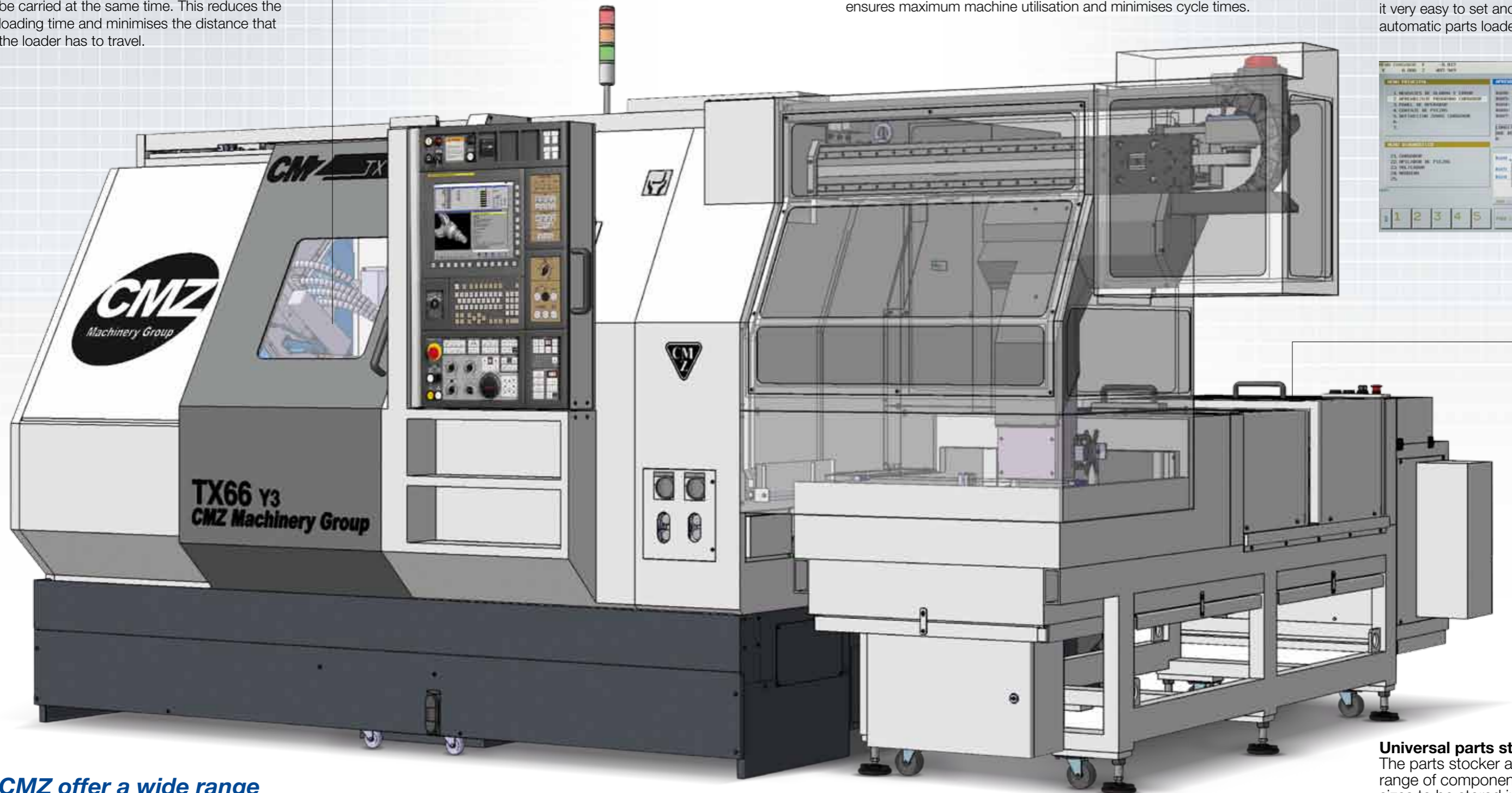
- Z axis speed (longitudinal): 180 m/min.
- X axis speed (vertical): 120 m/min.

**Loader with non-stop machining feature.**

The innovative design of this loader allows a part to be loaded or unloaded from the either chuck without stopping the opposite spindle. Unlike a gantry loader where the cycle has to stop for loading, this system allows for continuous production. This feature ensures maximum machine utilisation and minimises cycle times.

**VERY EASY TO USE.**

Easy to use and to program, CMZ have developed a conversational programming system that makes it very easy to set and use the automatic parts loader.



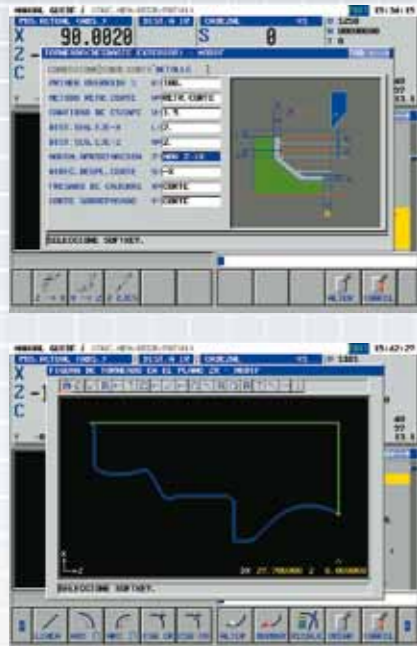
**CMZ offer a wide range of products for automation. Contact us for more information.**

**Universal parts stocker.**

The parts stocker allows a wide range of component types and sizes to be stored in the pre-machined and finished state. Blanks up to 150mm and 3kg can be accommodated by the automatic loader and stocker. Shafts up to 300mm long can also be handled.

# Latest generation control systems

**Manual Guide i. Conversational programming simplifies programming and program proving.**



**Nano CNC.**

The CNC makes internal calculations for the servos in 1/1000 of a micron (in nanometres - 0.000001mm).

**0.0001 mm resolution & 1 g acceleration.**

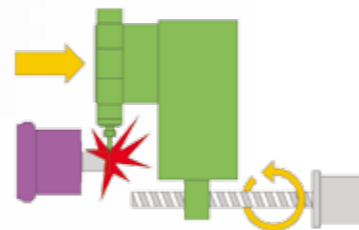
With 1 million pulse encoders, better precision, surface finish and acceleration are achieved.

**Manual handle retrace function.**

With this function you can retrace (forward and reverse) the programmed tool path of all 3 turrets using the electronic handwheel. This function can greatly reduce the setup time of the machine.

**Electronic detection of collisions.**

This function detects any abnormal torque on machine motors caused by mechanical impacts, immediately stopping machine heads and axes, which prevents further damage.



**Tool life management (optional).**

40 groups of up to 8 tools per group can be established so that when the life of the tool is over, either through the number of times that this has been called up or through cutting time, the machine automatically changes to the following tool from that group.



▲ Screen for displaying the state of tool life.

**Tool load monitoring (optional).**

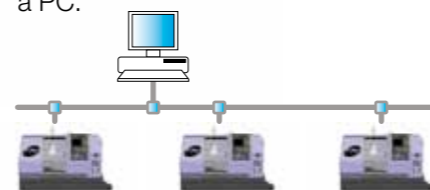
This function memorises the power consumption of each tool when the tool is new. Any change in power consumption is used to detect either a worn tool or a broken tool. This reduces the danger of accidents and rejects when working unattended jobs.



▲ Screen for typing values of tool wear and breakage.

**Ethernet connection.**

Connect the machine to your network using the CNC's FTP client to load and unload programs from a PC.



**Introduce a memory card and use it as a hard drive.**

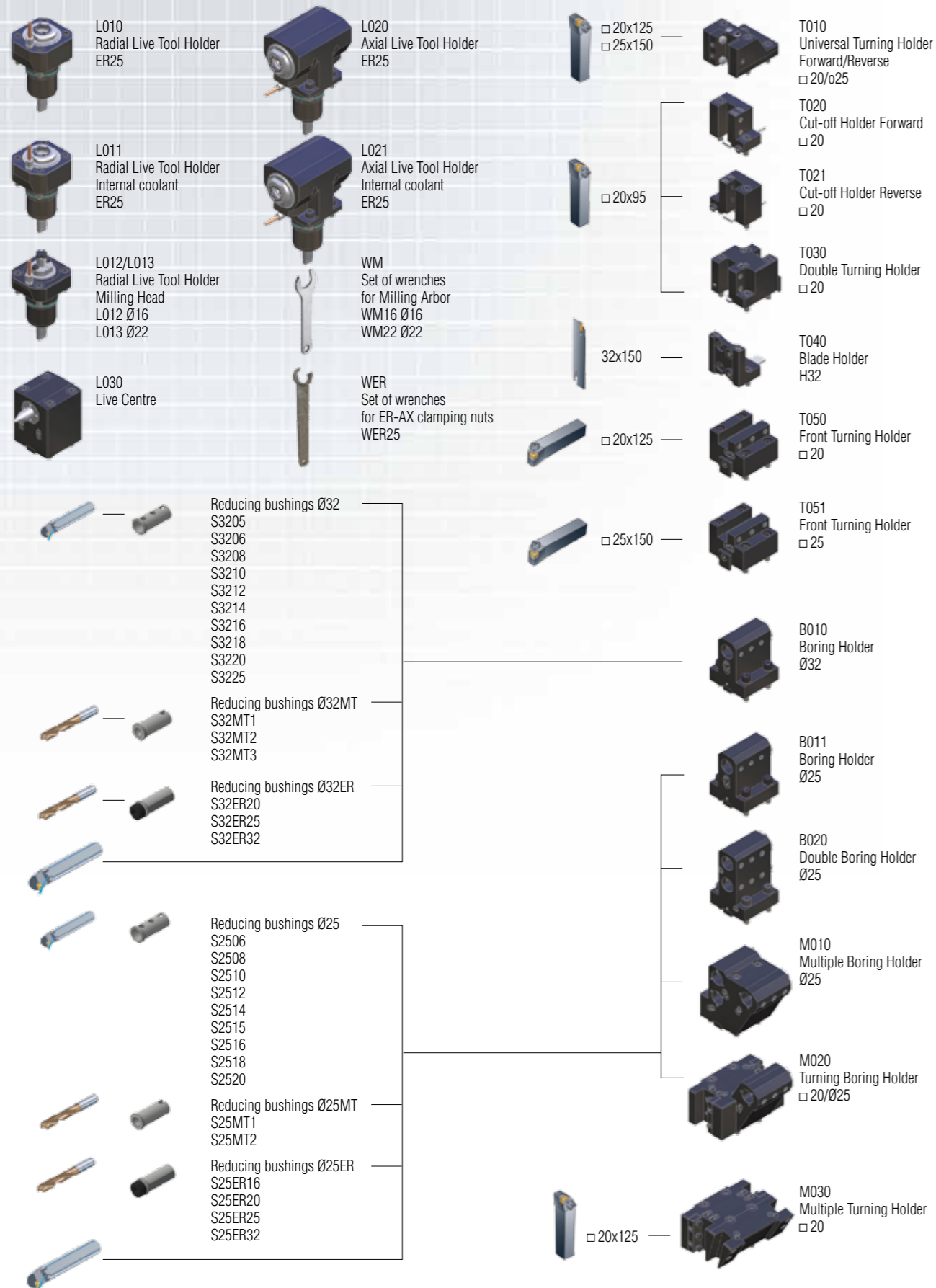
Insert a memory card then save and execute programs from it. The memory card can be installed permanently into the covered slot on the front panel. Once fitted, the cover can be closed for protection.



▶



## Tooling system:

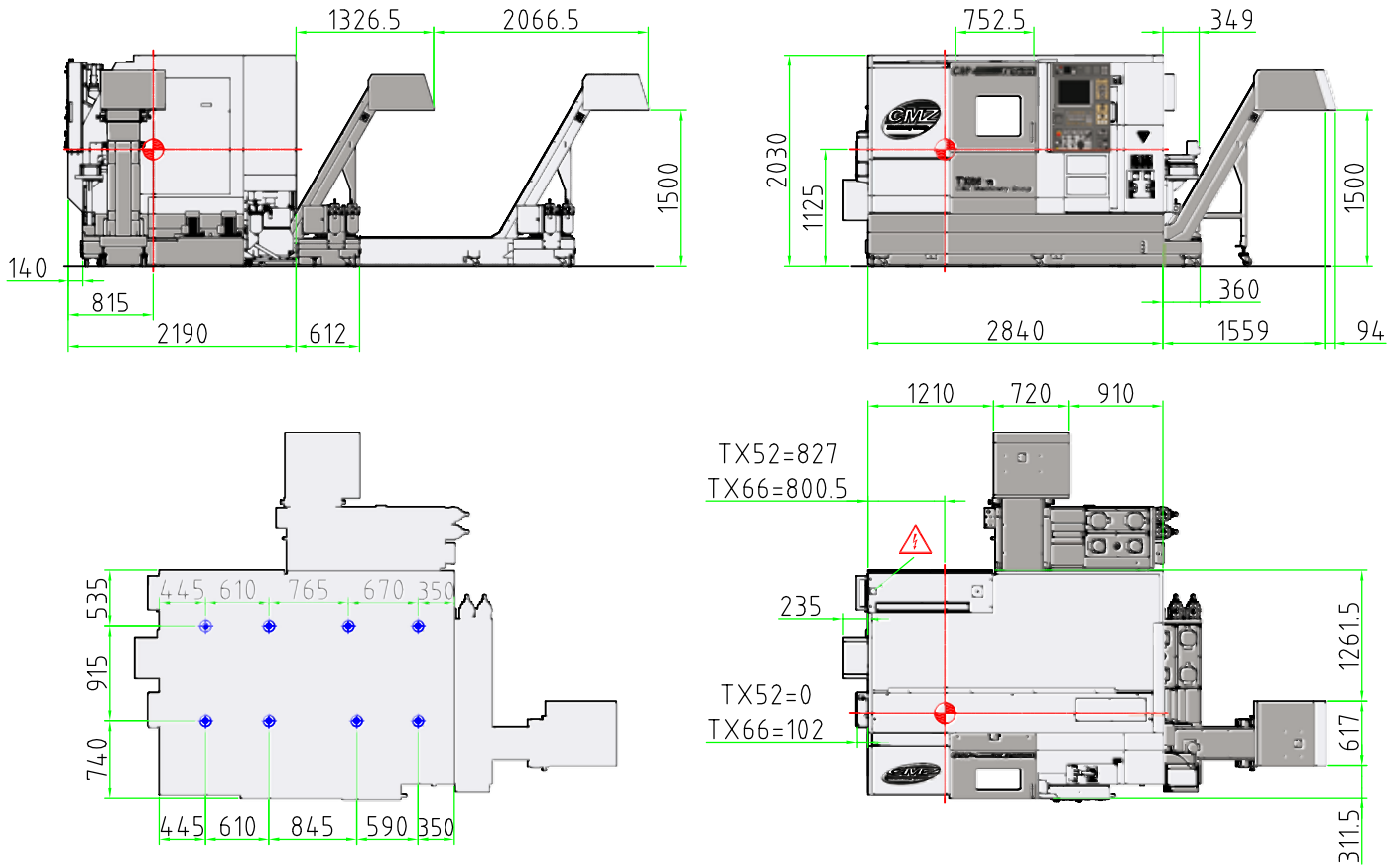


Technical Data	TX66 Y3	TX52 Y3	TX66 Y2 Quattro	TX52 Y2 Quattro	TX66 Y2 Twin	TX52 Y2 Twin	
Ø Maximum turning diameter (mm)	255	255	255	255	255	255	
Ø Maximum swing over carriage (mm)	270	270	270	270	270	270	
Distance between collet chucks (mm)	639	649	639	649	639	649	
Ø Inside diameter of left spindle (mm)	66	52	66	52	66	52	
Ø Inside diameter of right spindle (mm)	52	52	52	52	52	52	
Strokes upper L Turret	XL (mm)	190	190	-	190	190	
	ZL (mm)	300	300	-	300	300	
	YL (mm)	±40	±40	-	-	±40	
Strokes upper R Turret	XR (mm)	190	190	190	190	190	
	ZR (mm)	635	635	500	500	635	
	YR (mm)	±40	±40	±40	±40	±40	
Strokes Lower D Turret	XD (mm)	190	190	190	190	-	
	ZD (mm)	500	500	500	500	-	
	YD (mm)	±40	±40	±40	±40	-	
Strokes Right Spindle	635	635	635	635	635	635	
Rapid feed XL, XR & XD (m/min)	16	16	16	16	16	16	
Rapid feed ZL, ZR & ZD (m/min)	20	20	20	20	20	20	
Rapid feed YL, YR & YD (m/min)	12	12	12	12	12	12	
Rapid feed Right Spindle	30	30	30	30	30	30	
Axis acceleration	1 g (1g=9,8 m/sec <sup>2</sup> )	1 g (1g=9,8 m/sec <sup>2</sup> )	1 g (1g=9,8 m/sec <sup>2</sup> )	1 g (1g=9,8 m/sec <sup>2</sup> )	1 g (1g=9,8 m/sec <sup>2</sup> )	1 g (1g=9,8 m/sec <sup>2</sup> )	
Left-Headstock	Spindle speed (rpm)	4.000	5.000	4.000	5.000	4.000	5.000
	Ø Bearings external diameter (mm)	180	150	180	150	180	150
	Ø Bearings internal diameter (mm)	120	100	120	100	120	100
	Spindle nose	ASA 8" A2	ASA 6" A2	ASA 8" A2	ASA 6" A2	ASA 8" A2	ASA 6" A2
	Ø Inside diameter of spindle (mm)	77	61	77	61	77	61
	Ø Maximum bar size (internal diameter of drawtube)(mm)	66	52	66	52	66	52
	Ø Chuck diameter/bore size (mm)	210/66	175/56	210/66	175/56	210/66	175/56
	Spindle power (30 min/S1)	15/11 Kw	15/11 Kw	15/11 Kw	15/11 Kw	15/11 Kw	15/11 Kw
	Spindle torque (30 min/S1)	136/100 Nm	115/84 Nm	136/100 Nm	115/84 Nm	136/100 Nm	115/84 Nm
Right-Headstock	Spindle speed (rpm)	5.000	5.000	5.000	5.000	5.000	5.000
	Ø Bearings external diameter (mm)	150	150	150	150	150	150
	Ø Bearings internal diameter (mm)	100	100	100	100	100	100
	Spindle nose	ASA 6" A2	ASA 6" A2	ASA 6" A2	ASA 6" A2	ASA 6" A2	ASA 6" A2
	Ø Inside diameter of spindle (mm)	61	61	61	61	61	61
	Ø Maximum bar size (internal diameter of drawtube)(mm)	52	52	52	52	52	52
	Ø Chuck diameter/bore size (mm)	175/56	175/56	175/56	175/56	175/56	175/56
Spindle power (30 min/S1)	7,5/5,5 Kw	7,5/5,5 Kw	7,5/5,5 Kw	7,5/5,5 Kw	7,5/5,5 Kw	7,5/5,5 Kw	
Spindle torque (30 min/S1)	68/50 Nm	68/50 Nm	68/50 Nm	68/50 Nm	68/50 Nm	68/50 Nm	
Turret	Number of tool stations (each turret)	12	12	12	12	12	12
	Number of index positions	24	24	24	24	24	24
	Tools section	□ 20 / □ 25	□ 20 / □ 25	□ 20 / □ 25	□ 20 / □ 25	□ 20 / □ 25	□ 20 / □ 25
Driven Tools	Tool index time	0,1 sec	0,1 sec	0,1 sec	0,1 sec	0,1 sec	0,1 sec
	Number of driven tool positions (each turret)	12	12	12	12	12	12
	Maximum speed	6.000	6.000	6.000	6.000	6.000	6.000
Varios	Power (max.)	18 Kw	18 Kw	18 Kw	18 Kw	18 Kw	18 Kw
	Torque (max.)	52 Nm	52 Nm	52 Nm	52 Nm	52 Nm	52 Nm
Varios	Capacity of coolant tank - lateral type chip conveyor (litres)	350	350	350	350	350	350
	Capacity of coolant tank - rear type chip conveyor (litres)	250	250	250	250	250	250
	Capacity of hydraulic oil tank (litres)	10	10	10	10	10	10
	Capacity of lubrication oil tank (litres)	4	4	4	4	4	4
	Fully installed power (KVA)	65	65	65	65	65	65
	Installation voltage	400 V 50 Hz ± 5%	400 V 50 Hz ± 5%	400 V 50 Hz ± 5%	400 V 50 Hz ± 5%	400 V 50 Hz ± 5%	400 V 50 Hz ± 5%
	Max. ambient temperature	35° C	35° C	35° C	35° C	35° C	35° C
Weight	9.600 Kg	9.500 Kg	9.300 Kg	9.200 Kg	9.300 Kg	9.200 Kg	
Dimensions (mm)	2840x2190x2030	2840x2190x2030	2840x2190x2030	2840x2190x2030	2840x2190x2030	2840x2190x2030	

Due to constant development of our products all specifications given here in are subject to change without notice.



# TX Series-Dimensions



## CMZ Machinery Group, S.A.

Azkorra, s/n  
 48250 ZALDIBAR - Spain  
 Telf. +34 94 682 65 80  
 Fax +34 94 622 53 25  
 info@cmz.com  
 www.cmz.com

### CMZ France SAS

Parc Technologique Nord  
 65, Avenue Condorcet  
 38090 VAULX MILIEU - France  
 Telf. +33 (0)4 74 99 03 22  
 Fax +33 (0)4 74 94 74 01  
 contact@cmz.fr  
 www.cmz.fr

### CMZ UK Ltd

6 Davy Court  
 Central Park  
 Rugby  
 CV23 0UZ - United Kingdom  
 Telf. +44 (0)1788 56 21 11  
 Fax +44 (0)1788 56 21 22  
 info@cmz.co.uk  
 www.cmz.co.uk

DISTRIBUTOR / AGENT

### CMZ Deutschland GmbH

Holderäckerstr.31  
 70499 Stuttgart  
 Tel.: +49 (0) 711 469204 60  
 Fax +49 (0) 711 469204 80  
 info-de@cmz.com  
 www.cmz.com