

# Electromechanical Keyseating- and Profiling Machine



*Rapida CNCE32-2 PPC  
with manual indexing table TA180,  
PC control and 10" touch-screen*



*Rapida CNCE50-2 APC  
with automatic indexing table TA180A  
PC control and 15" touch-screen*



Our target to be the most innovative company in the Keyseating and Profiling market resulted in a new generation of Keyseating and Profiling Machines. The new machine concept is based on industry proven electromechanical drives and ballscrews for the stroke and infeed. The design criterion of this new machine type is that two concentrically arranged ballscrews are used for the stroke movement. Due to this arrangement the cutting power flows through the centerline of the machine.

Electromechanically driven Keyseating and Profiling Machines have been proved out in the market place for more than ten years. This machine design improves machine capabilities and cost effectiveness compared to hydraulically driven machines.

Another advantage of this machine type is that the main slide moves up and down through the center of the machine and covers, due to this construction, the minimized power flow of the cutting process.

The measurement of the stroke and feed movement is controlled by encoders integrated into the drives. So one of numerous machine failures caused by sensitive linear measuring systems is eliminated. Stroke and infeed axis are moved by a drive and one respectively by the two ballscrews. The connection between motor and ballscrews takes place by toothed belts.

The stiffness of the electromechanical drives improves workpiece surface finish as well as provides longer tool life. The new machine design meets the demands of the market to a productive and cost efficient machine.

The ball screw dimension for stroke and infeed axis match the power requirement of each machine for a long life of the ball screws. Together with the chosen drives the machines proved out for many different applications over years. The machining of surface hardened materials causes no problems to our electromechanically driven machines.

The compactness of our machine design with the electrical cabinet and panel mounted directly on the machine frame minimizes the floor space required compared to machines with a separate hydraulic system.

The very cost efficient version of our machines is driven by robust three phase motors. The high accuracy for feed axis enables precise reversal points and keyway depths. The machine is equipped with a compact panel PC control with a 10" touch screen.

The machine can also be delivered as a slightly more expensive PC-version with synchronized servo drives. These extremely progressive drives are equipped with an absolute transmitter system so that a reference run is not required when machine is started for the first working sequence.

The modular built PC has two main units, i.e. the control panel with 15" flat touchscreen and the control system fitted inside the electro cabinet. The swivel arm carrying the control panel can be set easily to the ergonomically best position for the machine operator.

Besides the necessary basic functions, which are required for each machine movement the PC provides more additional features as program storage, workpiece recognition(option), upcutting a.o. Due to the precise path control the machine is able to cut different contour keyways and in connection with an automatic indexing table also helical keyways with or without taper.

Operation of both control systems is conducted interactively in natural language. The operator is guided through the programme by easily followed menus and needs no special computer or programming skills.

A quick set up to other posts complete is ensured by fixed positions for tool and feed bar. This grants the advantage to the operator that he does not have to position the tooling inside the oily machine housing.















*Panel-PC with 10" touch-screen*



*Control panel with 15" touch-screen for CNC*

# Advantages:



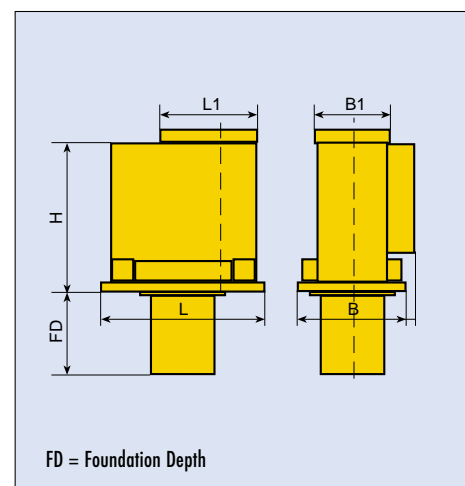
-  **Exact positioning of the stroke and feed axis without thermal expansion common with hydraulic machines.**
-  **Improved tool life and surface finish due to the stiffness of the ballscrew drives.**
-  **Environmentally friendly-no hydraulic oil to buy, store, change or dispose of.**
-  **Precise accuracy, repeatability and depth control.**
-  **Reduced floor space due to self contained compact design.**
-  **Energy saving up to 60 %.**
-  **Reduced set-up time up to 50 %.**
-  **No heat introduced into the machine or the environment by hydraulics.**
-  **User-friendly control, speed, feed and stroke are preselectable on the panel.**
-  **Convenient tool loading.**
-  **Manual and automatic indexing table are available as an option.**
-  **A very cost-effective solution for a wide variety of applications to meet the demands of today's market place.**

All these positive attributes result in a high quality, cost effectiveness and extend the application spectrum of our electromechanical keyseating and profiling machines.

## Technical Data: RAPIDA CNC

– Subject to change without notice –

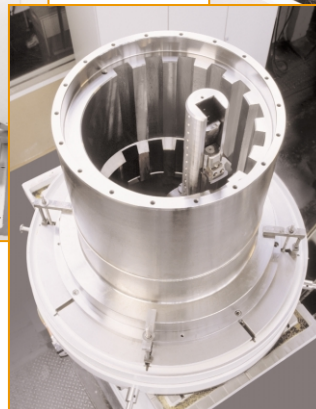
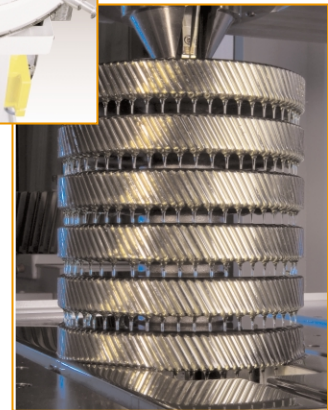
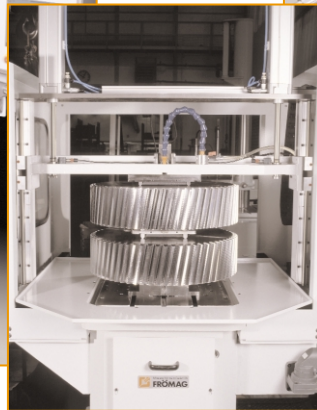
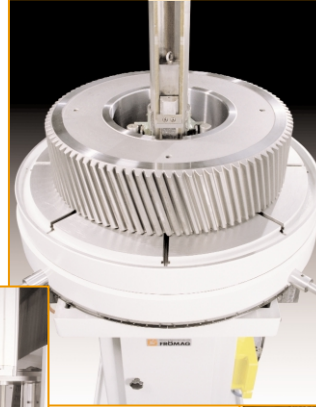
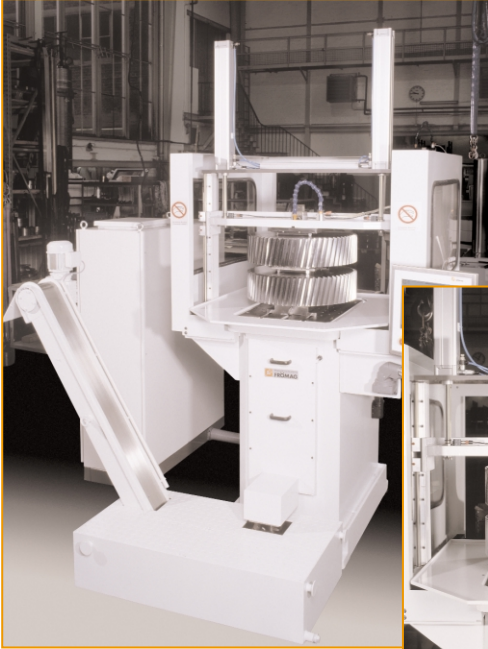
		CNCE 32-2	CNCE 50-2	CNCE 70-2
Keyway Width (mm)		2 – 32	2 – 50	2 – 70
Keyway Length(mm)		425/600	425/600	425/600
Bore Size		10 – 130	10 – 230	10 – 500
Cutting Speed		0 – 15	0 – 15	0 – 15
Return Speed		0 – 30	0 – 30	0 – 30
[m/min]				
Infeed Rates/Hub [mm]		0,01 – 1,5	0,01 – 1,5	0,01 – 1,5
Loading Capacity [kN]		300	350	350
Machine	H	1290	1290	1310
Dimensions [mm]	L	1100	1100	1100
	W	930	930	930
	FD*	250	250	250
Machine Table L1 x B1 [mm]		640 x 600	640 x 600	780 x 600



\* FD for keyway length larger than 425 mm only



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